Ala-88 to Cys-93,	H0618: 3, H0253: 3,
Ala-108 to Ser-139,	H0545: 3, L0662: 3,
Ser-145 to Ser-151,	H0689: 3, L0748: 3,
Asp-154 to Ala-164,	L0777: 3, L0758: 3,
Pro-168 to Thr-189,	L0785: 2, H0692: 2,
Pro-196 to Ser-203,	H0662: 2, H0550: 2,
Pro-229 to Ala-235,	S0049: 2, L0770: 2,
Thr-255 to Glu-261,	L0764: 2, L0659: 2,
Pro-271 to Pro-276,	H0670: 2, L0779: 2,
Pro-289 to Asn-310,	L0757: 2, L0759: 2,
Pro-318 to Tyr-329,	S0434: 2, H0225: 2,
Arg-334 to Arg-345,	S0218: 1, H0650: 1,
Arg-347 to Thr-356,	H0556: 1, L0426: 1,
Lys-373 to Arg-391,	S0212: 1, S0442: 1,
Glu-396 to Pro-414.	H0489: 1, H0580: 1,
	S0046: 1, S0132: 1,
	S0476: 1, H0549: 1,
	H0587: 1, H0333: 1,
	H0559: 1, H0427: 1,
	L0021: 1, H0599: 1,
	H0274: 1, H0581: 1,
	H0421: 1, H0052: 1,
	H0231: 1, L0157: 1,
	H0566: 1, H0123: 1,
	T0010: 1, H0408: 1,
	H0355: 1, H0266: 1,
	H0271: 1, H0687: 1,
	H0163: 1, H0087: 1,
	H0494: 1, H0359: 1,
	S0344: 1, L0371: 1,

HPDRZ03	1020130	557	122 - 751	2732		
				Asp-7 to Ala-15, Pro-34 to Ile-60, Gln-110 to Asn-117	L0637: 1, L0761: 1, L0646: 1, L0773: 1, L0363: 1, L0774: 1, L0375: 1, L0805: 1, L0658: 1, L0384: 1, L0543: 1, L0666: 1, L0663: 1, H0547: 1, H0593: 1, H0684: 1, H0660: 1, S0380: 1, H0710: 1, S0152: 1, H0521: 1, H0696: 1, H0134: 1, S0406: 1, H0436: 1, S0432: 1, L0744: 1, L0740: 1, S0436: 1, L0593: 1, H0665: 1 and H0422: 1.	L0777: 4, S0358: 3, H0486: 3, L0750: 3, L0779: 3, L0752: 3, S0412: 3, S0134: 2, H0013: 2, L0766: 2, L0803: 2, H0519: 2, H0658: 2, L0599: 2, L0604: 2, S0192: 2, T0002: 1, S0342: 1, S0212: 1, H0661: 1, H0619: 1, H0411: 1, H0632: 1, T0114: 1, H0575: 1, H0318: 1, T0110: 1, H0544: 1,

H0457: 1, H0328: 1, L0055: 1, H0169: 1, T0067: 1, S0422: 1, L0763: 1, L0773: 1, L0363: 1, L0804: 1, L0806: 1, L0663: 1, H0648: 1, S0152: 1, L0751: 1, L0756: 1, L0755: 1, L0731: 1, L0758: 1, L0593: 1, L0594: 1, H0665: 1, H0543: 1 and S0424: 1.	L0777: 7, L0759: 5, L0638: 3, L0766: 3, L0804: 3, L0663: 3, L0439: 3, H0657: 2, L0055: 2, L0666: 2, H0660: 2, L0604: 2, L0615: 1, S0358: 1, L0471: 1, H0628: 1, H0038: 1, S0344: 1, H0529: 1, L0761: 1, L0630: 1, L0646: 1, L0764: 1, L0364: 1, L0803: 1, L0805: 1, L0655: 1, L0809: 1, L0790: 1, L0532: 1, H0689: 1, H0435: 1, H0658: 1, S0330: 1, H0521: 1, H0436: 1,				
	2733				
	3745 - 2963				
	558				
	1020180				
	HOCPO73				

| HNKDT10 | 1020832 | 559 | 2 - 535 | 2734 | L0740: 1, L0749: 1, L0750: 1, L0757: 1, L0594: 1, L0595: 1 and S0026: 1. | S0330: 109, S0328: 51, S0446: 12, L0659: 5, L0666: 4, L0779: 4, S0456: 4, L0717: 3, L0775: 3, H0593: 3, L0748: 3, L0439: 3, L0747: 3, L0749: 3, L0758: 3, L0021: 2, H0615: 2, L0662: 2, L0766: 2, L0803: 2, L0663: 2, L0665: 2, S0310: 2, H0658: 2, H0648: 2, S0406: 2, L0740: 2, L0731: 2, L0595: 2, H0624: 1, H0662: 1, S0376: 1, H0351: 1, H0411: 1, H0587: 1, L0022: 1, L0105: 1, H0688: 1, H0617: 1, L0455: 1, H0494: 1, S0352: 1, S0464: 1, S0440: 1, S0422: 1, L0772: 1, L0646: 1, L0771: 1, L0773: 1, L0649: 1, L5569: 1, L0499: 1. |

HWHGO25	1020841	560	3 - 113	2735	Gly-7 to Leu-15, Pro-17 to His-29.	L0375: 1, L0651: 1, L0784: 1, L0806: 1, L0509: 1, L0655: 1, L0657: 1, L0513: 1, L0809: 1, L0545: 1, L0790: 1, L0791: 1, L0792: 1, L0664: 1, H0144: 1, H0519: 1, S0126: 1, S0404: 1, H0555: 1, L0751: 1, L0777: 1, S0436: 1 and L0592: 1. L0747: 5, L0805: 3, L0761: 2, L0803: 2, L0775: 2, H0658: 2, L0758: 2, S0298: 1, H0586: 1, H0597: 1, L0646: 1, L0776: 1, L0518: 1, L0519: 1, L0528: 1, L0529: 1, L0790: 1, L0666: 1, H0690: 1, H0521: 1, L0749: 1 and L0777: 1.
HWMNE31	1020852	561	157 - 681	2736	Thr-15 to Trp-23, Ala-44 to Gln-51, Lys-62 to Arg-70, Asp-102 to Lys-114, Val-116 to Ala-148, Phe-151 to Glu-163.	L0803: 13, L0766: 10, L0731: 8, L0751: 6, L0601: 6, L0756: 5, L0764: 4, L0789: 4, S0136: 4, H0436: 4, L0777: 4, L0596: 4, H0556: 3, H0580: 3,

H0328: 3, H0615: 3, H0090: 3, L0775: 3, L0666: 3, L0747: 3, L0755: 3, L0758: 3, S0412: 3, H0341: 2, S0376: 2, H0393: 2, H0549: 2, H0431: 2, H0587: 2, H0013: 2, L0021: 2, H0597: 2, H0014: 2, H0644: 2, L0800: 2, L0773: 2, L0662: 2, L0784: 2, L0805: 2, L0438: 2, H0520: 2, H0648: 2, L0748: 2, L0439: 2, L0740: 2, L0604: 2, H0265: 1, H0685: 1, S0114: 1, H0657: 1, H0656: 1, H0661: 1, H0663: 1, H0402: 1, S0358: 1, S0444: 1, S0360: 1, S0045: 1, H0351: 1, L0394: 1, S0222: 1, H0333: 1, H0575: 1, H0318: 1, H0421: 1, H0052: 1, T0103: 1, H0570: 1, H0024: 1, H0083: 1, H0067: 1, H0188: 1, S0003: 1, S0214: 1,

H0622: 1, H0673: 1, L0456: 1, H0163: 1, H0591: 1, H0040: 1, H0551: 1, T0067: 1, H0412: 1, H0560: 1, H0647: 1, S0142: 1, S0208: 1, S0422: 1, H0695: 1, L0369: 1, L0520: 1, L0763: 1, L0770: 1, L0638: 1, L0771: 1, L0794: 1, L0774: 1, L0651: 1, L0378: 1, L0776: 1, L0657: 1, L0809: 1, L0532: 1, L0663: 1, L0664: 1, L0665: 1, H0144: 1, H0725: 1, H0659: 1, H0666: 1, H0518: 1, H0521: 1, S0013: 1, H0696: 1, S0406: 1, S3014: 1, S0027: 1, L0754: 1, L0749: 1, L0752: 1, L0757: 1, S0260: 1, L0592: 1, S0026: 1, S0276: 1, H0542: 1, H0423: 1, H0422: 1 and H0721: 1	H0484: 35, L0751: 15, L0758: 12, H0483: 10,			
	2737	1 - 420	562	1020878
				HUSYJ75

L0743: 9, H0370: 8,
S0442: 7, S0126: 7,
S0436: 7, S0420: 6,
L0766: 6, H0670: 6,
H0672: 6, L0744: 6,
L0779: 6, S0434: 6,
H0661: 5, S0476: 5,
H0617: 5, H0660: 5,
S0027: 5, L0747: 5,
L0592: 5, S0040: 4,
H0716: 4, H0662: 4,
S0140: 4, H0545: 4,
H0150: 4, S0440: 4,
H0641: 4, H0689: 4,
H0682: 4, H0684: 4,
S0380: 4, S0406: 4,
S3014: 4, S0356: 3,
H0729: 3, H0733: 3,
S0007: 3, H0639: 3,
H0123: 3, H0424: 3,
S0366: 3, H0087: 3,
H0647: 3, L0769: 3,
L0775: 3, H0690: 3,
H0696: 3, S3012: 3,
L0740: 3, H0543: 3,
L0600: 3, H0713: 2,
H0663: 2, S0376: 2,
S0444: 2, S0408: 2,
S0046: 2, H0619: 2,
S0300: 2, S0278: 2,

H0592: 2, H0052: 2,
L0157: 2, H0688: 2,
H0606: 2, H0674: 2,
H0059: 2, H0100: 2,
L0763: 2, L0771: 2,
L0649: 2, L0633: 2,
L0383: 2, H0520: 2,
H0435: 2, H0658: 2,
H0648: 2, H0436: 2,
S0390: 2, L0748: 2,
L0777: 2, L0731: 2,
L0757: 2, L0759: 2,
S0260: 2, H0686: 1,
S6024: 1, H0294: 1,
S0134: 1, H0657: 1,
H0656: 1, S0180: 1,
S0212: 1, H0254: 1,
S0418: 1, S03540: 1,
S0410: 1, H0722: 1,
S0045: 1, S0I32: 1,
H0393: 1, H0550: 1,
H0587: 1, H0333: 1,
T0109: 1, H0101: 1,
H0427: 1, H0575: 1,
H0706: 1, T0048: 1,
S0474: 1, H0581: 1,
S0049: 1, H0309: 1,
H0597: 1, H0231: 1,
H0009: 1, H0178: 1,
H0567: 1, H0024: 1,

HSDFS07	1020904	563	2 - 1018	2738			
					Glu-1 to Asn-6, Glu-14 to Leu-19, Pro-22 to Ile-30, Ser-32 to Asp-40,	L0439: 5, L0777: 4, H0244: 2, S0010: 2, S0386: 2, L0764: 2, L0776: 2, L0809: 2,	H0051: 1, H0099: 1, H0594: 1, H0188: 1, S0214: 1, H0604: 1, H0417: 1, H0181: 1, H0673: 1, H0551: 1, H0412: 1, H0413: 1, H0494: 1, H0334: 1, S0150: 1, S0426: 1, H0529: 1, L0373: 1, L0374: 1, L0764: 1, L0385: 1, L0774: 1, L0375: 1, L0654: 1, L0657: 1, L0659: 1, L5623: 1, L0368: 1, L0665: 1, H0702: 1, H0519: 1, H0683: 1, S0328: 1, S0330: 1, H0539: 1, S0378: 1, H0522: 1, S0037: 1, S0028: 1, S0206: 1, L0754: 1, L0750: 1, H0445: 1, H0595: 1, L0591: 1, L0361: 1, L0601: 1, S0192: 1, H0542: 1, H0423: 1 and S0456: 1.

HCOPC09	1021208	564	620 - 378	2739	Ser-44 to Gln-53.	H0519: 2, L0756: 2, L0780: 2, H0369: 1, S0222: 1, S0346: 1, H0050: 1, H0428: 1, L0194: 1, L0455: 1, H0494: 1, L0769: 1, L0806: 1, L0807: 1, L0664: 1, H0520: 1, L0747: 1, L0779: 1, L0759: 1, S0031: 1 and L0592: 1.
					Gln-49 to Asn-62.	L0764: 3, S0360: 2, H0331: 2, H0575: 2, L0769: 2, H0670: 2, L0747: 2, L0777: 2, L0601: 2, S0358: 1, H0455: 1, H0492: 1, L0021: 1, L0763: 1, L0662: 1, L0803: 1, L0774: 1, L0775: 1, L0809: 1, H0683: 1, H0522: 1, L0743: 1, L0362: 1 and H0422: 1.
HVVBT22	1021323	565	811 - 2	2740	Pro-5 to Lys-15, Asn-31 to Ala-38, Asp-57 to Arg-64, Ala-75 to Asp-90, Gln-98 to Gly-123, Arg-125 to Gly-142, Met-155 to Gly-160.	H0424: 5, L0766: 3, S0222: 2, S0214: 2, S0422: 2, S0126: 2, S0442: 2, L0759: 2, S0330: 2, L0361: 2, L0362: 2, H0653: 2, H0220: 1, H0656: 1, H0341: 1,

HAMFW66	1021327	566	8 - 988	2741
	Leu-162 to Pro-182, Arg-187 to Met-192, Ser-199 to Asp-219, Pro-224 to Pro-253. H0449: 1, S0376: 1, S0045: 1, H0351: 1, H0587: 1, H0497: 1, S0010: 1, L0471: 1, H0373: 1, H0083: 1, H0266: 1, L0055: 1, H0163: 1, H0591: 1, H0551: 1, H0366: 1, H0509: 1, H0538: 1, L0770: 1, L0772: 1, L0381: 1, L0775: 1, L0653: 1, L0518: 1, L0665: 1, H0144: 1, H0520: 1, H0547: 1, H0689: 1, H0672: 1, S0328: 1, H0539: 1, H0696: 1, L0747: 1, L0752: 1, L0591: 1, L0592: 1, H0216: 1 and S0396: 1.			His-3 to Phe-9, Asn-176 to Thr-184, Glu-217 to Lys-225, Lys-263 to Asp-268 AR053: 3, AR052: 3, AR096: 2, AR033: 2, AR089: 2, AR055: 2, AR104: 1, AR060: 1, AR039: 0, AR061: 0, AR039: 0, L0754: 12, S0410: 10, L0766: 9, L0591: 7, L0748: 4, L0752: 4, H0423: 4, H0556: 3, S0360: 3, L0646: 3,

L0527: 3, L0596: 3,
H0170: 2, H0265: 2,
S0114: 2, S0218: 2,
H0266: 2, H0615: 2,
H0056: 2, H0560: 2,
H0561: 2, L0803: 2,
L0782: 2, H0547: 2,
H0134: 2, H0436: 2,
L0756: 2, H0445: 2,
L0362: 2, H0543: 2,
L0002: 1, H0650: 1,
S0418: 1, H0208: 1,
S0046: 1, S0476: 1,
H0619: 1, H0437: 1,
H0550: 1, T0114: 1,
H0013: 1, T0048: 1,
H0318: 1, L0109: 1,
H0050: 1, L0471: 1,
S0051: 1, H0083: 1,
H0328: 1, H0622: 1,
H0604: 1, H0031: 1,
H0591: 1, H0551: 1,
H0268: 1, H0623: 1,
H0100: 1, H0132: 1,
L0763: 1, L0667: 1,
L0388: 1, L0804: 1,
L0776: 1, L0606: 1,
H0657: 1, L0659: 1,
L0542: 1, L0518: 1,
L0809: 1, L0791: 1,

HPMBW86	1021661	567	3 - 179	2742	Leu-2 to Gly-15, Val-31 to Gly-40, Gly-45 to Ala-51.	L0792: 1, L0793: 1, H0519: 1, H0682: 1, H0648: 1, S0330: 1, S0152: 1, S0406: 1, L0750: 1, L0779: 1, L0757: 1, L0759: 1, L0480: 1, H0542: 1 and H0506: 1.		
HOFMK02	1021666	568	138 - 230	2743	Thr-24 to Leu-29.	H0341: 1, S0222: 1, H0156: 1, H0052: 1, H0031: 1, L0766: 1, H0658: 1, H0670: 1 and L0612: 1.		
HOUHK71	1021682	569	311 - 370	2744	Arg-11 to Trp-20.	H0415: 2 and H0486: 1.	11p15	109985, 186921, 602092
HCOOW23	1021759	570	54 - 800	2745	Thr-10 to Arg-16, Arg-21 to Ser-31, Asn-97 to Arg-102, Ile-170 to Ser-175, Thr-207 to Gly-213.	L0755: 4, H0638: 2, S0342: 1, H0101: 1, H0457: 1, H0051: 1, L0768: 1, L0803: 1, L0650: 1, L0806: 1, L0518: 1, H0689: 1, H0648: 1, L0756: 1 and L0759: 1.		
HACMT02	1021794	571	272 - 3	2746		H0685: 2		

| HISDS67 | 1022018 | 572 | 2322 - 1756 | 2747 | Gln-4 to Ala-17, Ala-56 to Gln-61, Cys-166 to Ala-182. | L0754: 8, H0553: 4, L0770: 4, L0794: 4, H0615: 3, L0769: 3, L0803: 3, L0439: 3, L0777: 3, L0752: 3, H0052: 2, L0637: 2, L0768: 2, L0805: 2, L0659: 2, L0666: 2, L0664: 2, H0547: 2, H0593: 2, H0682: 2, H0539: 2, H0521: 2, L0744: 2, L0757: 2, L0604: 2, L0601: 2, H0624: 1, H0657: 1, H0656: 1, S0212: 1, H0254: 1, H0662: 1, L0005: 1, S0045: 1, H0619: 1, H0550: 1, H0592: 1, H0013: 1, H0036: 1, H0618: 1, H0620: 1, H0023: 1, S0051: 1, H0188: 1, H0028: 1, H0428: 1, T0006: 1, H0213: 1, L0455: 1, H0135: 1, H0038: 1, H0616: 1, H0264: 1, H0413: 1, T0069: 1, S0038: 1, H0100: 1, L0763: 1, L0638: 1, L5565: 1, |

HOVAA59	1022037	573	2892-1309	2748	Pro-1 to Gly-10, Pro-20 to Gly-34, Pro-36 to Gly-45, Ala-51 to Pro-65, Val-78 to Arg-83, Gln-89 to Gly-98, Lys-114 to Val-119, Arg-158 to Ala-164, Thr-306 to Lys-313.	L0601: 4, H0617: 3, L0794: 2, L0629: 2, L0657: 2, L0604: 2, T0049: 1, S0218: 1, L0785: 1, S0442: 1, H0733: 1, H0411: 1, T0109: 1, H0428: 1, H0673: 1, S0366: 1, H0040: 1, H0616: 1, L0763: 1, L0375: 1, L0805: 1, L0658: 1, H0593: 1, H0658: 1, H0672: 1, L0743: 1, L0744: 1, L0748: 1, L0740: 1, L0751: 1, L0754: 1, L0750: 1, L0596: 1, L0485: 1 and L0761: 1, L0667: 1, L0804: 1, L0650: 1, L0375: 1, L0776: 1, L0807: 1, L0809: 1, L0519: 1, L0663: 1, L0665: 1, H0520: 1, S0126: 1, H0684: 1, H0435: 1, H0659: 1, H0648: 1, S0190: 1, S0404: 1, H0555: 1, L0741: 1, L0751: 1, L0747: 1, L0753: 1 and L0758: 1.

515

HOCPL72	1022059	574	2 - 1099	2749	Pro-1 to Glu-14, Pro-26 to Val-33, Tyr-167 to Tyr-174, Pro-188 to Ser-196.	H0721: 1, L0766: 3, H0457: 2, H0706: 1, H0015: 1, H0373: 1, H0266: 1, H0553: 1, H0551: 1, H0509: 1, L0761: 1, L0665: 1, H0144: 1, H0689: 1, H0660: 1 and S0328: 1.
HCOMM05	1022082	575	1 - 840	2750	Gln-19 to Asp-38, Pro-46 to Thr-55, Leu-96 to Gly-104, Ala-114 to Ala-119, Gln-125 to Trp-131, Pro-133 to Pro-141, Phe-144 to Glu-150, Glu-180 to Val-185, Glu-192 to Glu-197, Glu-254 to Leu-262, Met-272 to Ser-280.	AR089: 1, AR096: 1, AR061: 1, AR060: 1, AR033: 1, AR055: 0, AR052: 0, AR039: 0, AR104: 0, L0508: 9, H0620: 7, L0774: 6, L0509: 6, S0408: 5, L0750: 5, L0601: 5, L0515: 4, L0512: 4, H0594: 3, L0805: 3, L0514: 3, L0511: 3, H0670: 3, L0755: 3, H0556: 2, H0686: 2, S0358: 2, S0444: 2, H0199: 2, H0181: 2, H0617: 2, H0494: 2, L0505: 2, L0502: 2, L0769: 2, L0803: 2, L0809: 2, L0528: 2, L0663: 2, L0752: 2, H0657: 1,

| HLYDC86 | 1022162 | 576 | 3 - 947 | 2751 | Pro-39 to Arg-45, Arg-52 to Ile-60, Glu-87 to Cys-96, Thr-108 to Ser-114, Thr-121 to Glu-128, | H0255: 1, S0420: 1, S0442: 1, S0360: 1, H0549: 1, H0586: 1, L0021: 1, H0036: 1, H0052: 1, H0597: 1, H0086: 1, H0012: 1, S0336: 1, H0606: 1, H0124: 1, L0504: 1, L0763: 1, L0627: 1, L0373: 1, L0764: 1, L0499: 1, L0498: 1, L0497: 1, L0376: 1, L0653: 1, L0493: 1, L0510: 1, L0513: 1, L0384: 1, L0789: 1, L0666: 1, L0665: 1, H0689: 1, H0660: 1, H0672: 1, S0328: 1, S0330: 1, S0454: 1, S0406: 1, S0432: 1, L0754: 1, L0747: 1, L0749: 1, L0779: 1, L0777: 1, L0731: 1, L0759: 1, S0434: 1 and H0506: 1. | L0794: 4, S0002: 2, L0803: 2, H0445: 2, H0250: 1, H0412: 1, S0344: 1, L0761: 1, L0809: 1, H0435: 1 and H0506: 1. | 14q24.3 | 104311, 109150, 182600, 245200, 601208 |

HTLEP21	1022167	577	92 - 457	2752	Met-133 to Thr-141, Asn-154 to Ala-169, Glu-174 to His-179, Gln-205 to Gln-213, Pro-222 to Phe-231, Ser-259 to Phe-265, Leu-282 to Ser-288.	L0747: 1.
HVCAS77	1022313	578	170 - 1072	2753	Glu-7 to Leu-18, Glu-75 to Arg-80, Gln-152 to Gln-157, Gln-202 to Lys-219, Ser-259 to Gly-266, Glu-277 to His-287.	H0253: 1 and L0767: 1. L0766: 7, L0769: 6, S0418: 4, L0747: 4, S0424: 3, H0341: 2, S0278: 2, L0471: 2, H0083: 2, H0538: 2, L0770: 2, L0771: 2, L0775: 2, L0809: 2, H0520: 2, L0744: 2, L0754: 2, L0777: 2, L0759: 2, L0597: 2, S0026: 2, H0667: 2, H0171: 1, H0686: 1, S0212: 1, H0125: 1, S0420: 1, S0358: 1, S0376: 1, S0360: 1, S0046: 1, H0393: 1, H0333: 1, H0575: 1, H0581: 1, H0309: 1, H0046: 1, H0567: 1, H0188: 1, H0428: 1, H0553: 1, H0135: 1.

| HOGCA79 | 1022627 | 579 | 210 - 635 | 2754 | Thr-69 to Phe-77, Asp-80 to Thr-85. | H0547: 5, L0747: 4, L0766: 3, H0328: 2, H0551: 2, L0774: 2, H0435: 2, H0659: 2, H0436: 2, L0740: 2, L0754: 2, L0759: 2, L0596: 2, H0657: 1, H0341: 1, S0418: 1, S0360: 1, S0007: 1, H0229: 1, H0486: 1, H0013: 1, H0156: 1, H0037: 1, L0055: 1, L0455: 1, H0163: 1, H0616: 1, L0060: 1, H0560: 1, H0529: 1, L0763: 1, L0770: 1, L0764: 1, L0767: 1, | H0040: 1, T0041: 1, L0369: 1, L0763: 1, L0643: 1, L0764: 1, L0773: 1, L0804: 1, L0375: 1, L0806: 1, L0776: 1, L0655: 1, L0783: 1, L0382: 1, L0666: 1, H0144: 1, H0593: 1, H0435: 1, H0659: 1, H0660: 1, H0666: 1, L0750: 1, L0755: 1, L0731: 1, L0757: 1 and H0543: 1. |

| HSKJP93 | 1022663 | 580 | 2 - 247 | 2755 | Ser-3 to Gln-9, Thr-25 to Lys-40. | L0768: 1, L0775: 1, L0806: 1, L0776: 1, L0659: 1, L0783: 1, L0663: 1, L0664: 1, H0658: 1, H0670: 1, S0380: 1, H0522: 1, H0134: 1, S0392: 1, H0345: 1, L0745: 1, L0756: 1, L0777: 1, L0780: 1, L0731: 1 and H0445: 1. | L0777: 9, H0622: 3, L0771: 3, L0747: 3, L0752: 3, H0657: 2, L0763: 2, L0517: 2, L0666: 2, L0748: 2, L0590: 2, H0050: 1, H0188: 1, H0687: 1, H0428: 1, H0039: 1, H0031: 1, H0032: 1, H0674: 1, S0036: 1, H0652: 1, L0369: 1, L0520: 1, L0769: 1, L0765: 1, L0773: 1, L0662: 1, L0794: 1, L0803: 1, L0804: 1, L0775: 1, L0651: 1, L0655: 1, L0659: 1, L0782: 1, L0789: 1, L0665: 1, L0438: 1, |

HAZAA64	1022719	581	106 - 705	2756	Asn-58 to Thr-64, Ile-72 to Ser-78, Gly-119 to Lys-128, Thr-185 to Leu-200.	H0670: 1, H0660: 1, S0406: 1, S3014: 1, L0756: 1, L0758: 1, L0759: 1, L0595: 1, S0011: 1 and H0712: 1.	H0695: 414, H0580: 44, L0777: 6, L0731: 6, H0052: 5, L0766: 5, L0747: 5, H0617: 4, H0494: 4, S0045: 3, H0083: 3, H0181: 3, H0038: 3, L0637: 3, L0779: 3, L0758: 3, H0484: 2, H0599: 2, S0049: 2, H0428: 2, L0774: 2, L0775: 2, L0518: 2, L0439: 2, L0750: 2, L0596: 2, L0588: 2, L0599: 2, L0601: 2, H0265: 1, H0556: 1, T0002: 1, S0040: 1, H0294: 1, H0341: 1, H0254: 1, H0255: 1, S0420: 1, S0444: 1, S0360: 1, H0208: 1, H0492: 1, L0623: 1, H0013: 1, S0280: 1, H0156: 1, L0021: 1, S0010: 1, H0194: 1, H0046: 1,

	HSEBD72	1022904	582	140 - 430	2757	Thr-11 to Arg-16, Asn-78 to Asp-84.	H0200: 1, H0051: 1, H0510: 1, H0375: 1, H0266: 1, H0188: 1, S0036: 1, H0087: 1, H0412: 1, H0102: 1, T0042: 1, L0475: 1, H0130: 1, L0769: 1, L0768: 1, L0794: 1, L0651: 1, L0776: 1, L0807: 1, L0665: 1, S0374: 1, H0520: 1, H0689: 1, H0690: 1, H0659: 1, H0660: 1, H0672: 1, S0328: 1, H0522: 1, H0696: 1, S3012: 1, S0028: 1, L0749: 1, L0755: 1, L0759: 1, L0608: 1, L0604: 1, S0011: 1 and H0543: 1.	S0406: 9, L0754: 9, L0747: 9, L0752: 9, H0556: 7, L0742: 7, L0758: 7, S0410: 6, H0658: 6, L0779: 6, H0656: 5, S0444: 5, S0360: 5, H0660: 5, H0657: 4, H0255: 4, H0545: 4, H0012: 4, H0620: 4, H0708: 4,	14q24.1	182600

L0744: 4, L0731: 4,
H0423: 4, H0662: 3,
L0622: 3, H0597: 3,
L0199: 3, H0615: 3,
H0688: 3, H0428: 3,
S0440: 3, S0422: 3,
H0529: 3, L0769: 3,
L0768: 3, H0670: 3,
I10134: 3, S3012: 3,
L0743: 3, S0116: 2,
H0125: 2, S0420: 2,
S0046: 2, H0333: 2,
H0486: 2, H0050: 2,
H0023: 2, H0383: 2,
H0673: 2, H0124: 2,
H0413: 2, H0561: 2,
S0438: 2, L0371: 2,
L0772: 2, L0662: 2,
L0776: 2, L0528: 2,
H0593: 2, H0684: 2,
H0435: 2, H0659: 2,
S0328: 2, H0521: 2,
S3014: 2, L0748: 2,
L0740: 2, L0745: 2,
L0750: 2, L0780: 2,
L0757: 2, H0445: 2,
H0668: 2, H0136: 2,
H0216: 2, H0422: 2,
H0265: 1, S0114: 1,
H0650: 1, S0110: 1,

H0484: 1, H0483: 1,
H0254: 1, H0661: 1,
H0663: 1, H0402: 1,
S0356: 1, S0354: 1,
S0358: 1, S0376: 1,
H0722: 1, S0468: 1,
S0007: 1, S0045: 1,
S0278: 1, S0222: 1,
H0370: 1, H0613: 1,
H0600: 1, T0039: 1,
T0040: 1, T0112: 1,
H0013: 1, H0253: 1,
H0318: 1, H0235: 1,
H0327: 1, H0530: 1,
H0081: 1, L0471: 1,
H0197: 1, H0246: 1,
S0050: 1, H0373: 1,
H0275: 1, H0083: 1,
H0266: 1, T0006: 1,
H0033: 1, H0604: 1,
H0553: 1, H0617: 1,
H0376: 1, S0036: 1,
H0135: 1, H0090: 1,
H0038: 1, H0634: 1,
H0087: 1, H0059: 1,
H0100: 1, H0494: 1,
S0464: 1, S0142: 1,
S0210: 1, L0762: 1,
L0761: 1, L0764: 1,
L0771: 1, L0773: 1,

HDPYE27	1022911	583	380 - 1066	2758				9q13-q21	
					Trp-1 to Ser-8,	L0521: 1, L0626: 1,	AR096: 1, AR104: 1,		190100,
					His-11 to Asn-16,	L0767: 1, L0649: 1,	AR052: 0, AR060: 0,		200150,
					Gln-19 to Pro-25,	L0774: 1, L0375: 1,	AR089: 0, AR039: 0,		229300,
					Gly-38 to Gly-44,	L0806: 1, L0807: 1,	AR061: 0, AR055: 0,		229300,
					Leu-54 to Arg-62,	L0517: 1, L0529: 1,	AR033: 0		600429,
					Ser-70 to Asp-78,	L0665: 1, H0520: 1,	L0740: 18, H0521: 15,		600884,
					Gln-83 to Ser-88,	S0126: 1, H0690: 1,	S0003: 14, L0777: 13,		600974,
					Thr-99 to Asn-105,	H0709: 1, S0152: 1,	L0754: 12, L0756: 12,		600998,
					Ser-123 to Val-135,	S0044: 1, S0404: 1,	H0710: 11, L0747: 10,		602014
					Pro-143 to Arg-169,	H0555: 1, S0027: 1,	L0766: 9, L0438: 9,		
					His-194 to Tyr-206,	S0028: 1, S0032: 1,	L0750: 7, L0752: 7,		
						H0444: 1, L0596: 1,	H0622: 6, I10522: 6,		
						L0605: 1, S0276: 1,	L0439: 6, L0757: 6,		
						H0542: 1, H0543: 1 and	L0156: 5, L0775: 5,		
						L0352: 1.	S0136: 5, L0731: 5,		

S0026: 5, H0661: 4,
H0638: 4, H0581: 4,
H0052: 4, H0032: 4,
L0598: 4, L0770: 4,
L0649: 4, H0144: 4,
H0547: 4, H0659: 4,
S0360: 3, L0471: 3,
S6028: 3, S0214: 3,
L0483: 3, H0553: 3,
H0038: 3, L0769: 3,
L0764: 3, L0774: 3,
L0659: 3, L0666: 3,
H0436: 3, L0744: 3,
L0599: 3, S0196: 3,
H0713: 2, S0116: 2,
S0408: 2, H0632: 2,
H0013: 2, S0474: 2,
L0163: 2, T0010: 2,
H0510: 2, H0375: 2,
H0271: 2, H0615: 2,
H0617: 2, S0036: 2,
H0090: 2, H0616: 2,
T0044: 2, H0494: 2,
S0438: 2, S0344: 2,
L0662: 2, L0768: 2,
L0776: 2, L0665: 2,
H0723: 2, H0520: 2,
H0519: 2, S0328: 2,
S0330: 2, S0028: 2,
L0748: 2, L0779: 2,

L0753: 2, L0758: 2,
L0597: 2, L0592: 2,
L0485: 2, H0543: 2,
L0422: 2, H0677: 2,
H0624: 1, H0171: 1,
H0556: 1, S0040: 1,
H0716: 1, H0657: 1,
H0669: 1, S0420: 1,
S0442: 1, S0358: 1,
S0444: 1, H0580: 1,
H0208: 1, S0045: 1,
H0645: 1, L0717: 1,
H0351: 1, H0549: 1,
H0550: 1, S0222: 1,
H0431: 1, H0614: 1,
H0455: 1, H0587: 1,
I0040: 1, T0060: 1,
H0427: 1, S0280: 1,
H0706: 1, H0421: 1,
S0049: 1, H0544: 1,
H0545: 1, H0150: 1,
H0569: 1, H0050: 1,
H0373: 1, N0007: 1,
H0201: 1, S0051: 1,
S0318: 1, S0334: 1,
H0687: 1, S0312: 1,
H0428: 1, T0006: 1,
H0031: 1, H0644: 1,
I0212: 1, S0364: 1,
L0455: 1, H0708: 1,

H0591: 1, H0040: 1,
T0067: 1, H0379: 1,
H0264: 1, H0488: 1,
T0069: 1, T0004: 1,
S0038: 1, H0641: 1,
H0646: 1, S0144: 1,
H0538: 1, S0210: 1,
S0422: 1, S0002: 1,
S0426: 1, UNKWN: 1,
H0529: 1, L0763: 1,
L0371: 1, L0637: 1,
L0761: 1, L0630: 1,
L0372: 1, L0646: 1,
L0771: 1, L0773: 1,
L0364: 1, L0803: 1,
L0651: 1, L0806: 1,
L0655: 1, L0661: 1,
L0657: 1, L0526: 1,
L0809: 1, L0544: 1,
L0663: 1, S0148: 1,
S0310: 1, L0352: 1,
H0593: 1, S0126: 1,
H0435: 1, H0670: 1,
H0648: 1, H0539: 1,
L0602: 1, H0696: 1,
S0044: 1, H0555: 1,
H0478: 1, L0743: 1,
L0751: 1, L0745: 1,
L0755: 1, H0445: 1,
S0308: 1, S0394: 1,

HCRQL51	1022997	584	47 - 1030	2759	Ser-35 to Gly-40, Ser-103 to His-109, Tyr-151 to Gly-159, Pro-216 to Glu-224, Asn-249 to Trp-258, Pro-278 to Glu-284.	L0480: 1, L0362: 1, S0106: 1, S0192: 1, S0242: 1, H0542: 1, H0423: 1, S0424: 1 and S0446: 1.	7q32	180105, 190900, 228800, 246900

H0013:10, H0644: 6,
H0144: 6, H0615: 5,
L0748: 4, L0777: 4,
H0393: 3, T0114: 3,
H0012: 3, H0024: 3,
H0529: 3, L0438: 3,
H0547: 3, L0439: 3,
H0624: 2, H0170: 2,
H0341: 2, L0005: 2,
H0370: 2, H0050: 2,
L0471: 2, H0031: 2,
H0038: 2, L0750: 2,
L0758: 2, H0595: 2,
L0592: 2, H0171: 1,
S0212: 1, S0418: 1,
S0356: 1, H0619: 1,
L0717: 1, S0222: 1,
H0427: 1, H0036: 1,
H0046: 1, H0620: 1,
H0594: 1, H0266: 1,
H0328: 1, L0142: 1,
H0591: 1, H0616: 1,
H0059: 1, H0625: 1,
S0210: 1, L0768: 1,
H0520: 1, H0519: 1,

HDTCC55	1023046	585	195 - 533	2760	Ser-26 to Ser-32.	H0672: 1, S0152: 1, H0555: 1, L0742: 1, L0779: 1, H0445: 1, S0194: 1, H0422: 1 and L0698: 1.
HCOIO91	1023049	586	1307 - 525	2761	Ala-2 to Thr-9.	H0486: 1 and L0766: 1.
HCE4K28	1023227	587	238 - 840	2762	Phe-15 to Gly-29.	L0750: 6, L0766: 5, L0809: 4, L0747: 4, L0758: 4, S0354: 3, H0617: 3, L0775: 3, L0783: 3, H0690: 3, S0406: 3, L0753: 3, L0601: 3, H0255: 2, S0007: 2, H0618: 2, H0253: 2, H0309: 2, H0150: 2, H0428: 2, H0553: 2, H0494: 2, L0770: 2, L0771: 2, L0803: 2, L0774: 2, L0666: 2, S0330: 2, H0539: 2, H0134: 2, L0777: 2, L0592: 2, H0624: 1, H0686: 1, H0664: 1, S0408: 1, H0489: 1, H0580: 1, H0351: 1, S0278: 1, H0333: 1, H0559: 1, S0474: 1, H0052: 1,

HPDVY62	1023264	588	2 - 1126	2763		10q26.13-q26.3	263700
					H0545: 1, T0003: 1, H0124: 1, H0634: 1, H0087: 1, H0477: 1, H0412: 1, L0763: 1, L0769: 1, L0761: 1, L0767: 1, L0804: 1, L0806: 1, L0805: 1, L0659: 1, L0787: 1, L0791: 1, H0547: 1, S0126: 1, H0658: 1, H0670: 1, S0328: 1, S0380: 1, H0521: 1, H0522: 1, L0742: 1, L0744: 1, L0748: 1, L0779: 1, L0731: 1, L0759: 1, L0589: 1, L0581: 1, H0665: 1, S0276: 1 and H0352: 1.	H0624: 2, H0586: 2, H0031: 2, L0748: 2, L0439: 2, H0171: 1, S0356: 1, S0376: 1, L0052: 1, H0251: 1, H0050: 1, H0014: 1, H0051: 1, H0647: 1, L0789: 1, H0144: 1, H0658: 1, H0521: 1, L0754: 1, L0752: 1, S0436: 1, S0276: 1 and S0424: 1.		

HLHDK42	1023339	589	1 - 351	2764		H0024: 2 and H0596: 1.	
HLDRQ55	1023375	590	2 - 421	2765		H0081: 1, H0510: 1 and H0144: 1.	
HVVBI06	1023414	591	1449 - 646	2766	Asn-19 to Asp-29, Leu-34 to Gly-41.	H0543: 7, H0341: 6, S0003: 5, L0740: 5, L0747: 5, H0619: 4, H0575: 4, H0318: 4, S0206: 4, L0750: 4, L0588: 4, H0542: 4, H0265: 3, S0358: 3, S0046: 3, H0486: 3, H0069: 3, S0022: 3, L0666: 3, H0556: 2, S0116: 2, S0212: 2, S0418: 2, S0376: 2, S0360: 2, S0132: 2, H0497: 2, L0471: 2, H0090: 2, H0551: 2, H0494: 2, H0633: 2, S0144: 2, H0529: 2, L0662: 2, L0655: 2, L0664: 2, H0144: 2, L0547: 2, S0152: 2, L0757: 2, H0445: 2, H0624: 1, S6024: 1, S0114: 1, S0134: 1, S0218: 1, H0650: 1, H0657: 1, H0656: 1, H0663: 1, H0562: 1,	X

S0420: 1, H0580: 1,
S0007: 1, H0393: 1,
H0441: 1, H0331: 1,
H0574: 1, T0039: 1,
T0114: 1, H0427: 1,
H0004: 1, H0581: 1,
H0052: 1, H0251: 1,
H0184: 1, T0115: 1,
I10046: 1, H0009: 1,
H0050: 1, H0620: 1,
H0024: 1, H0373: 1,
H0510: 1, S6028: 1,
H0266: 1, H0267: 1,
S0318: 1, S03316: 1,
H0028: 1, S0214: 1,
H0328: 1, H0428: 1,
H0031: 1, H0644: 1,
H0628: 1, H0169: 1,
H0598: 1, H0038: 1,
H0616: 1, I10380: 1,
H0272: 1, H0412: 1,
S0150: 1, H0647: 1,
H0646: 1, S0344: 1,
S0210: 1, S0422: 1,
S0002: 1, L0769: 1,
L0372: 1, L0646: 1,
L0649: 1, L0774: 1,
L0775: 1, L0438: 1,
H0519: 1, S0126: 1,
H0660: 1, H0666: 1,

| HOCME51 | 1023422 | 592 | 2 - 319 | 2767 | Glu-36 to Thr-44, His-72 to Tyr-78, Glu-82 to Tyr-88. | H0623: 4, H0046: 3, H0581: 2, H0023: 2, H0083: 2, L0791: 2, L0438: 2, H0547: 2, H0539: 2, L0750: 2, H0583: 1, H0341: 1, H0125: 1, S0420: 1, S0356: 1, H0208: 1, S0045: 1, H0261: 1, S0222: 1, H0592: 1, H0635: 1, H0318: 1, H0052: 1, L0163: 1, H0266: 1, H0494: 1, L0475: 1, H0538: 1, L3904: 1, S0374: 1, H0660: 1, H0522: 1, H0134: 1, S0028: 1, S0206: 1, L0439: 1, L0753: 1, L0595: 1, | H0672: 1, S0380: 1, L0602: 1, H0134: 1, S0390: 1, S3014: 1, S0027: 1, S0028: 1, L0748: 1, L0439: 1, L0754: 1, L0749: 1, L0756: 1, L0731: 1, H0444: 1, H0595: 1, L0595: 1, L0361: 1, L0603: 1, H0667: 1, H0422: 1 and S0424: 1. |

| HPDOP74 | 1023531 | 593 | 1659 - 307 | 2768 | Leu-23 to Asp-31, Gln-46 to Ile-69, Ile-120 to Lys-128, Pro-148 to Asp-154, Pro-216 to Val-223, Asn-261 to Ala-273, Gly-290 to Gln-299, Lys-305 to Tyr-312, Glu-341 to Ala-346, Pro-394 to Met-404, Ser-418 to Ser-440, Glu-442 to Gly-450. | H0542: 1, H0543: 1 and H0506: 1. | L0591: 11, H0069: 9, H0494: 9, L0588: 7, H0543: 7, H0657: 6, H0318: 6, T0042: 6, H0547: 6, H0556: 5, L0665: 5, L0751: 5, H0423: 5, T0002: 4, H0050: 4, L0747: 4, L0779: 4, H0341: 3, H0638: 3, H0580: 3, H0393: 3, H0052: 3, H0266: 3, H0617: 3, H0616: 3, H0413: 3, H0521: 3, L0754: 3, L0596: 3, L0362: 3, H0422: 3, H0265: 2, L0470: 2, H0305: 2, H0637: 2, S0045: 2, H0370: 2, T0109: 2, L0156: 2, H0599: 2, H0575: 2, H0036: 2, H0618: 2, H0253: 2, L0483: 2, H0181: 2, H0038: 2, H0561: 2, H0646: 2, L0770: 2, L0769: 2, L0646: 2, L0521: 2, L0662: 2, L0768: 2, L0803: 2. |

L0653: 2, L0776: 2,
L0789: 2, L0438: 2,
L0602: 2, H0134: 2,
S0027: 2, L0743: 2,
L0587: 2, L0608: 2,
L0593: 2, S0106: 2,
H0542: 2, H0170: 1,
H0294: 1, T0049: 1,
S0134: 1, S0218: 1,
H0484: 1, H0255: 1,
H0669: 1, H0661: 1,
H0662: 1, S0354: 1,
S0360: 1, L0717: 1,
S0278: 1, H0437: 1,
H0592: 1, H0586: 1,
H0587: 1, H0574: 1,
H0632: 1, H0492: 1,
T0039: 1, L0586: 1,
H0635: 1, H0581: 1,
H0251: 1, H0263: 1,
T0110: 1, H0231: 1,
H0327: 1, H0544: 1,
H0546: 1, H0046: 1,
H0178: 1, H0014: 1,
H0015: 1, H0083: 1,
H0099: 1, S0318: 1,
H0687: 1, S0003: 1,
H0615: 1, H0428: 1,
T0006: 1, H0031: 1,
H0165: 1, L0455: 1,

H0124: 1, S0366: 1,
H0135: 1, H0634: 1,
H0551: 1, H0264: 1,
H0412: 1, H0059: 1,
H0102: 1, S0039: 1,
T0041: 1, H0560: 1,
H0359: 1, H0509: 1,
S0150: 1, L0763: 1,
L0761: 1, L0800: 1,
L0771: 1, L0648: 1,
L0363: 1, L0794: 1,
L0386: 1, L0375: 1,
L0376: 1, L0784: 1,
L0805: 1, L0654: 1,
L0606: 1, L0659: 1,
L0384: 1, L0382: 1,
L0809: 1, L0788: 1,
L0666: 1, L0663: 1,
H0144: 1, H0702: 1,
S0374: 1, H0593: 1,
S0122: 1, H0690: 1,
H0435: 1, H0658: 1,
H0660: 1, H0672: 1,
S0330: 1, H0539: 1,
S0152: 1, H0522: 1,
H0436: 1, H0626: 1,
S3014: 1, L0749: 1,
L0756: 1, L0758: 1,
S0031: 1, S0260: 1,
H0444: 1, H0445: 1,

| HMSOH12 | 1023545 | 594 | 1 - 1077 | 2769 | Lys-25 to Asp-31,
His-46 to Glu-54,
Ser-80 to Lys-86,
Val-109 to Lys-115,
Arg-143 to Met-149,
Lys-193 to Arg-198,
His-253 to Gly-259. | H0707: 1, L0592: 1,
H0653: 1, H0665: 1,
S0276: 1 and S0424: 1. | L0731: 12, L0439: 10,
L0747: 8, L0770: 7,
L0662: 6, L0775: 5,
L0663: 5, H0423: 5,
L0769: 4, L0752: 4,
H0422: 4, H0657: 3,
H0656: 3, S0356: 3,
S0360: 3, S0222: 3,
H0318: 3, H0083: 3,
L0764: 3, L0768: 3,
L0766: 3, L0809: 3,
L0665: 3, H0547: 3,
H0682: 3, H0659: 3,
H0672: 3, L0750: 3,
L0588: 3, L0591: 3,
S0007: 2, H0581: 2,
H0644: 2, H0412: 2,
S0002: 2, S0426: 2,
L0648: 2, L0364: 2,
L0774: 2, L0375: 2,
L0655: 2, L0666: 2,
L0664: 2, H0520: 2,
H0435: 2, H0666: 2,
H0651: 2, H0521: 2,
S0027: 2, L0740: 2,
L0755: 2, L0757: 2,
L0758: 2, H0542: 2, |

H0171: 1, H0556: 1,
H0686: 1, S0430: 1,
H0650: 1, H0341: 1,
S0212: 1, S0418: 1,
L0717: 1, H0411: 1,
H0610: 1, H0415: 1,
H0486: 1, H0427: 1,
H0559: 1, S0010: 1,
S0346: 1, H0596: 1,
H0046: 1, H0050: 1,
H0012: 1, H0014: 1,
H0051: 1, H0355: 1,
H0266: 1, S0250: 1,
L0483: 1, T0006: 1,
L0055: 1, H0040: 1,
H0413: 1, S0472: 1,
S0210: 1, H0695: 1,
L0598: 1, L0640: 1,
L0638: 1, L0761: 1,
L0381: 1, L0803: 1,
L0650: 1, L0651: 1,
L0378: 1, L0806: 1,
L0653: 1, L0776: 1,
L0661: 1, L0527: 1,
L0659: 1, L0529: 1,
H0144: 1, H0702: 1,
L0438: 1, H0519: 1,
L0670: 1, H0648: 1,
S0328: 1, S0044: 1,
H0694: 1, H0555: 1,

HOPJG50	1023584	595	866 - 507	2770	Thr-18 to Asn-31, Lys-39 to Ser-47, Ser-71 to His-76, Gln-113 to Lys-120.	H0436: 1, L0748: 1, L0756: 1, L0779: 1, H0595: 1, L0608: 1, L0591: 1, L0595: 1, L0362: 1, S0026: 1, H0136:1 and S0192: 1.			
HDUAB04	1023585	596	3 - 371	2771	Thr-21 to Asn-34, Lys-42 to Ser-50, Ser-74 to His-79, Gln-116 to Lys-123.	L0748: 2, L0749: 2, L0731: 2, H0624: 1, H0486: 1, H0309: 1, L0769: 1, L0653: 1, H0684: 1 and L0779: 1.	4		
HVCAA38	1023632	597	27 - 818	2772	Asn-12 to Thr-17, Gln-60 to Arg-66, Ser-71 to Asn-83, Thr-89 to Ala-96, Gln-120 to Thr-126, Glu-149 to Lys-154, Thr-213 to Ser-219, Arg-231 to Tyr-244, Trp-252 to Trp-259.		4	22q12.1	123620, 188826, 600850, 601669
HIBCN87	1023837	598	1753 - 776	2773	Arg-1 to Cys-7, Val-96 to Arg-105, Glu-130 to Leu-135, Pro-207 to Arg-225, Asp-231 to Cys-251, Pro-259 to Ile-264.	L0439: 8, L0794: 5, L0758: 5, L0805: 4, S0358: 3, L0809: 4, S0358: 3, L0769: 3, L0776: 3, L0665: 3, L0438: 3, H0658: 3, L0717: 2.		22q13.1	103050, 103050, 124030, 124030, 138981, 182380.

HPCOM04	1024000	599	36 - 818	2774	Arg-1 to Gln-7, Pro-18 to Leu-23, Asp-42 to Ile-47, Gln-56 to Glu-63, Glu-93 to Ile-105, Glu-132 to Leu-137, Ile-202 to Leu-208, Asn-220 to Lys-226, Asn-254 to Phe-259	L0438: 3, L0764: 2, H0659: 2, L0754: 2, H0589: 1, H0580: 1, H0013: 1, H0622: 1, H0617: 1, T0067: 1, L0767: 1, L0775: 1, L0655: 1, L0659: 1, L0666: 1, H0648: 1, S0030: 1, H0710: 1, L0748: 1, L0740: 1, L0747: 1, L0753: 1, L0480: 1 and L0599: 1.	22q11.1	231950, 600850
				Pro-294 to Pro-304, Glu-310 to Ile-316, Ser-320 to Pro-326.	H0052: 2, H0059: 2, L0662: 2, L0803: 2, L0789: 2, H6690: 2, L0748: 2, H0556: 1, S0114: 1, H0583: 1, S0376: 1, H0600: 1, H0618: 1, H0253: 1, T0010: 1, H0252: 1, H0617: 1, H0038: 1, H0100: 1, L0520: 1, L0761: 1, L0768: 1, L0766: 1, L0783: 1, L0666: 1, L0663: 1, H0547: 1, H0593: 1, H0683: 1, H0670: 1, H0648: 1, H0436: 1, L0751: 1, L0755: 1, H0445: 1 and H0352: 1.		188826, 190040, 190040, 190040

HUCPU06	1024069	600	609 - 313	2775		L0766: 5, L0770: 2, L0803: 2, L0666: 2, L0747: 2, L0603: 2, H0686: 1, S0420: 1, L0662: 1, L0794: 1, L0783: 1, L0383: 1, L0809: 1, L0665: 1, H0684: 1, H0658: 1 and L0750: 1.
HPAME01	1024332	601	564 - 1061	2776	Cys-1 to Gln-6, Val-19 to Ala-24.	L0439: 12, L0743: 5, L0747: 5, L0749: 5, L0769: 4, L0794: 4, L0731: 4, L0803: 3, L0774: 3, L0809: 3, H0254: 2, H0393: 2, H0318: 2, H0052: 2, H0188: 2, H0040: 2, L0659: 2, L0790: 2, L0438: 2, L0753: 2, H0423: 2, H0265: 1, H0685: 1, H0341: 1, H0402: 1, S0360: 1, H0580: 1, L0717: 1, H0550: 1, H0370: 1, H0333: 1, H0643: 1, H0486: 1, H0013: 1, H0250: 1, H0599: 1, H0042: 1, H0253: 1, H0327: 1, H0046: 1, H0086: 1, H0012: 1.

| HTTIS76 | 1024472 | 602 | 3 - 392 | 2777 | Pro-1 to His-22, Lys-45 to Arg-59, Asp-77 to Pro-88, Ser-109 to Glu-119. | S0051: 1, H0399: 1, H0687: 1, H0286: 1, H0617: 1, H0032: 1, H0673: 1, S0036: 1, H0135: 1, H0591: 1, H0087: 1, H0100: 1, T0044: 1, H0494: 1, H0561: 1, H0130: 1, L0638: 1, L0764: 1, L0662: 1, L0804: 1, L0651: 1, L0657: 1, L0783: 1, L0666: 1, L0664: 1, L0665: 1, L0352: 1, H0547: 1, H0519: 1, H0682: 1, H0684: 1, H0521: 1, S0044: 1, H0631: 1, S0206: 1, L0754: 1, L0779: 1, L0780: 1, L0597: 1, H0543: 1, H0422: 1 and H0506: 1. | L0740: 15, L0754: 7, L0747: 6, L0777: 6, L0662: 5, L0539: 5, L0439: 5, L0758: 5, L0438: 4, L0748: 4, S0444: 3, H0031: 3, H0553: 3, L0770: 3, L0774: 3, L0749: 3, L0756: 3, L0755: 3, |

L0757: 3, S0300: 2,
H0427: 2, H0046: 2,
H0123: 2, H0264: 2,
H0413: 2, L0646: 2,
L0794: 2, L0663: 2,
H0547: 2, H0672: 2,
L0744: 2, L0779: 2,
L0731: 2, L0362: 2,
S0040: 1, H0713: 1,
S0400: 1, S0354: 1,
S0358: 1, S0376: 1,
S0408: 1, H0722: 1,
S0045: 1, S0476: 1,
H0393: 1, S0222: 1,
H0643: 1, S0280: 1,
H0156: 1, L0105: 1,
T0048: 1, H0230: 1,
H0052: 1, H0251: 1,
H0545: 1, L0157: 1,
H0014: 1, S6028: 1,
S0036: 1, H0634: 1,
H0616: 1, H0551: 1,
T0067: 1, L0598: 1,
L0637: 1, L0764: 1,
L0773: 1, L0521: 1,
L0533: 1, L0804: 1,
L0806: 1, L0776: 1,
L0657: 1, L0634: 1,
L0659: 1, L0783: 1,
L0809: 1, L0666: 1,

| HCORI57 | 1024556 | 603 | 230 - 1237 | 2778 | Gly-29 to Glu-35, Met-57 to Lys-64, Ser-104 to Ser-109, Tyr-122 to Val-128, Pro-144 to Asp-153, Pro-244 to Gly-253, Arg-323 to Pro-330. | H0519: 1, S0126: 1, H0689: 1, H0658: 1, H0666: 1, H0648: 1, H0651: 1, S0328: 1, S0152: 1, S0350: 1, H0521: 1, H0696: 1, S0146: 1, L0750: 1, L0752: 1, L0759: 1, H0445: 1, L0684: 1, L0686: 1, S0434: 1, S0436: 1, L0599: 1, L0361: 1 and S0106: 1. | H0553: 9, H0624: 4, L0471: 4, H0619: 3, H0494: 3, H0520: 3, H0547: 3, S0126: 3, L0755: 3, H0013: 2, H0031: 2, H0644: 2, H0040: 2, L0659: 2, L0666: 2, L0665: 2, H0144: 2, H0519: 2, H0670: 2, L0780: 2, L0361: 2, S0026: 2, H0171: 1, H0661: 1, S0360: 1, H0244: 1, H0156: 1, L0021: 1, S0010: 1, H0052: 1, H0046: 1, L0163: 1, S0214: 1, L0142: 1, H0032: 1, H0551: 1, | 8p22 | 148370, 238600, 238600, 238600, 600143, 601385, 602629 |

| HNORG50 | 1024624 | 604 | 2 - 1120 | 2779 | Ile-1 to Gln-18, Lys-69 to Gln-74, Ala-81 to Arg-86, Lys-102 to Lys-107, Glu-146 to Val-153, His-156 to Ile-161, Glu-195 to Ser-207, Asp-306 to Leu-316, Ala-318 to Gly-333, Gln-346 to Asp-352. | H0059: 1, L0598: 1, L0520: 1, L0769: 1, L0637: 1, L0768: 1, L0803: 1, L0804: 1, L0653: 1, L0657: 1, L0383: 1, H0690: 1, H0435: 1, H0658: 1, S0330: 1, H0518: 1, S0152: 1, S0044: 1, S0027: 1, L0754: 1, L0747: 1, L0750: 1, L0731: 1, L0608: 1, L0593: 1, L0594: 1 and H0667: 1. | L0601: 25, S0474: 22, H0521: 17, S0278: 16, H0542: 14, H0543: 13, L0596: 11, H0580: 10, H0494: 10, H0575: 8, L0659: 8, H0581: 7, H0559: 6, H0031: 6, L0655: 6, S3014: 6, S0027: 6, L0591: 6, H0657: 5, S0358: 5, S0360: 5, H0457: 5, H0529: 5, L0666: 5, S0152: 5, L0748: 5, L0731: 5, H0583: 4, L0650: 4, H0587: 4, H0318: 4, H0040: 4, |

S0144: 4, S0142: 4,
L0646: 4, L0657: 4,
S0380: 4, H0522: 4,
L0439: 4, H0445: 4,
H0423: 4, H0295: 3,
H0656: 3, H0638: 3,
S0046: 3, H0052: 3,
H0083: 3, H0266: 3,
H0553: 3, H0644: 3,
H0551: 3, H0264: 3,
H0059: 3, S0440: 3,
S0002: 3, L0761: 3,
L0649: 3, L0664: 3,
S0126: 3, H0689: 3,
H0672: 3, L0755: 3,
H0422: 3, L0600: 3,
H0624: 2, H0265: 2,
H0556: 2, S0114: 2,
S0134: 2, H0341: 2,
H0402: 2, H0637: 2,
S0045: 2, H0550: 2,
H0392: 2, H0586: 2,
H0250: 2, H0545: 2,
H0050: 2, H0424: 2,
H0413: 2, H0561: 2,
H0641: 2, S0344: 2,
S0426: 2, L0369: 2,
L0770: 2, L0769: 2,
L0662: 2, L0766: 2,
L0375: 2, L0378: 2,

L0653: 2, L0635: 2,
L0382: 2, H0702: 2,
H0659: 2, S0350: 2,
S0037: 2, L0740: 2,
L0754: 2, L0747: 2,
S0434: 2, S0196: 2,
H0585: 1, H0294: 1,
T0049: 1, S0116: 1,
S0212: 1, H0484: 1,
H0255: 1, H0306: 1,
H0305: 1, H0459: 1,
S0418: 1, S0420: 1,
L0562: 1, S0442: 1,
S0354: 1, S0376: 1,
S0140: 1, H0370: 1,
H0613: 1, H0642: 1,
H0257: 1, H0492: 1,
H0486: 1, H0635: 1,
H0002: 1, H0599: 1,
H0706: 1, H0421: 1,
S0049: 1, T0110: 1,
H0041: 1, L0157: 1,
H0023: 1, H0051: 1,
S0051: 1, H0107: 1,
H0375: 1, H0179: 1,
H0271: 1, S0214: 1,
H0039: 1, H0622: 1,
H0628: 1, H0617: 1,
H0090: 1, H0087: 1,
H0488: 1, H0412: 1,

T0042: 1, H0280: 1, H0560: 1, H0509: 1, H0646: 1, H0538: 1, L0762: 1, L0638: 1, L0637: 1, L0372: 1, L0642: 1, L0643: 1, L0773: 1, L0648: 1, L0363: 1, L0794: 1, L0381: 1, L0804: 1, L0774: 1, L0775: 1, L0806: 1, L0805: 1, L0776: 1, L0383: 1, L0663: 1, H0144: 1, H0697: 1, S0374: 1, H0691: 1, L0438: 1, H0519: 1, H0690: 1, H0682: 1, H0684: 1, H0435: 1, H0658: 1, H0648: 1, S0328: 1, H0539: 1, H0518: 1, S0044: 1, H0134: 1, H0214: 1, H0555: 1, H0627: 1, S0432: 1, S3012: 1, S0028: 1, S0032: 1, L0743: 1, L0749: 1, L0779: 1, L0777: 1, L0757: 1, L0597: 1, L0599: 1, L0608: 1, H0665: 1, S0194: 1 and S0424: 1.

| HWLVR07 | 1024915 | 605 | 687 - 328 | 2780 | 2780 | Lys-28 to Thr-33, Asn-35 to Lys-53, Ala-98 to Glu-104. | |
| HOPKF60 | 1025047 | 606 | 1132 - 197 | 2781 | 2781 | Glu-41 to Lys-46, Ser-49 to Glu-55, Asp-109 to Arg-114, His-133 to Asp-138, Arg-170 to Glu-181, Ala-246 to Pro-254, Lys-282 to Ser-287, Ala-296 to Asp-302. | S0358: 10, H0584: 9, S0420: 8, L0439: 8, H0543: 8, H0250: 7, H0618: 7, L0601: 7, S0046: 6, H0424: 6, H0251: 5, H0046: 5, L0438: 5, H0435: 5, H0136: 5, S0045: 4, H0599: 4, H0494: 4, H0561: 4, H0547: 4, H0539: 4, L0748: 4, L0751: 4, S0212: 3, S0007: 3, H0486: 3, H0706: 3, H0253: 3, H0545: 3, S0036: 3, H0040: 3, H0551: 3, H0264: 3, H0132: 3, H0529: 3, H0144: 3, H0520: 3, H0448: 3, H0445: 3, H0665: 3, H0423: 3, H0677: 3, H0624: 2, S0040: 2, H0341: 2, H0484: 2, H0125: 2, S0360: 2, S0222: 2, H0586: 2, H0497: 2, H0575: 2, H0318: 2, H0052: 2 |

H0059: 2, T0042: 2,
S0440: 2, H0641: 2,
S0210: 2, S0002: 2,
S0126: 2, H0689: 2,
H0666: 2, H0521: 2,
S0027: 2, L0752: 2,
S0434: 2, H0422: 2,
S0042: 2, S0424: 2,
H0170: 1, H0171: 1,
H0556: 1, T0002: 1,
H0218: 1, H0161: 1,
H0686: 1, S0342: 1,
H0716: 1, H0295: 1,
H0294: 1, H0656: 1,
H0483: 1, H0661: 1,
H0458: 1, H0638: 1,
H0192: 1, S0356: 1,
S0442: 1, S0376: 1,
S0444: 1, H0675: 1,
H0580: 1, S0468: 1,
H0208: 1, H0393: 1,
L0717: 1, S0278: 1,
H0261: 1, H0550: 1,
S6014: 1, H0370: 1,
H0592: 1, H0333: 1,
H0559: 1, H0256: 1,
H0485: 1, T0040: 1,
L0586: 1, H0069: 1,
H0075: 1, H0042: 1,
H0581: 1, H0121: 1,

H0041: 1, H0123: 1,
H0050: 1, H0012: 1,
H0620: 1, H0014: 1,
L0163: 1, H0051: 1,
S0051: 1, T0010: 1,
H0083: 1, H0266: 1,
H0179: 1, H0271: 1,
H0292: 1, H0286: 1,
S0022: 1, H0039: 1,
H0553: 1, H0628: 1,
H0617: 1, I10383: 1,
H0598: 1, H0135: 1,
H0087: 1, H0380: 1,
H0412: 1, H0413: 1,
H0056: 1, H0100: 1,
T0041: 1, S0015: 1,
H0625: 1, S0464: 1,
S0294: 1, S0438: 1,
H0509: 1, H0130: 1,
H0646: 1, H0652: 1,
S0344: 1, S0374: 1,
L0565: 1, T0068: 1,
H0693: 1, H0519: 1,
H0593: 1, H0684: 1,
H0658: 1, H0670: 1,
H0660: 1, H0518: 1,
S0332: 1, H0522: 1,
H0694: 1, H0555: 1,
H0479: 1, H0447: 1,
H0626: 1, S3014: 1,

HBDAD74	1025102	607	2 - 406	2782	Gly-22 to Glu-28, Glu-42 to Arg-60, Leu-67 to Glu-89, Asp-106 to Thr-118, Gln-120 to Ile-130.	L0766: 7, L0803: 4, L0779: 3, H0421: 2, H0615: 2, L0382: 2, L0748: 2, L0777: 2, L0002: 1, S0116: 1, H0638: 1, S0358: 1, H0393: 1, S6022: 1, H0431: 1, H0586: 1, H0486: 1, H0427: 1, S0474: 1, H0327: 1, H0057: 1, H0428: 1, S0036: 1, L0351: 1, H0538: 1, L0638: 1, L0667: 1, L0653: 1, L0659: 1, L0809: 1, H0693: 1, L0438: 1, I10547: 1, S0146: 1, H0626: 1, L0746: 1, L0756: 1, L0752: 1, L0731: 1, L0758: 1. S0028: 1, L0743: 1, L0744: 1, L0754: 1, L0745: 1, L0747: 1, L0755: 1, L0757: 1, L0759: 1, H0595: 1, L0596: 1, L0592: 1, L0608: 1, L0593: 1, H0668: 1, H0653: 1, H0542: 1, H0506: 1 and H0352: 1.

HPCTY12	1025231	608	68 - 1225	Ala-1 to Ser-8.	S0308: 1, H0595: 1, L0596: 1 and L0599: 1. L0805: 3, H0657: 2, L0769: 2, L0766: 2, L0659: 2, L0809: 2, L0789: 2, L0665: 2, L0565: 2, H0659: 2, L0749: 2, L0777: 2, L0755: 2, L0596: 2, H0685: 1, H0583: 1, H0650: 1, H0656: 1, H0663: 1, S0420: 1, S0356: 1, H0619: 1, L0717: 1, H0586: 1, H0251: 1, H0050: 1, H0622: 1, H0135: 1, H0038: 1, H0551: 1, H0272: 1, H0561: 1, H0509: 1, L0637: 1, L0646: 1, L0794: 1, L0387: 1, L0776: 1, L0655: 1, L0657: 1, L0636: 1, L0666: 1, L0664: 1, H0520: 1, H0547: 1, H0519: 1, H0672: 1, L0593: 1, H0667: 1 and H0352: 1.	12q12-q13	107777, 123940, 139350, 139350, 148040, 148041, 148043, 148070, 231550, 600194, 600231, 600536, 600808, 600956, 601284, 601769, 601769, 601928, 602116, 602153
HFASF12	1025327	609	103 - 201	Pro-19 to Cys-28.	L0747: 4, L0757: 4, L0759: 4, L0770: 3, L0769: 2, L0659: 2.		

H0691: 2, L0750: 2, S0116: 1, H0638: 1, S0300: 1, H0587: 1, L0021: 1, S0474: 1, H0529: 1, L0762: 1, L0764: 1, L0768: 1, L0775: 1, L0776: 1, L0634: 1, L0783: 1, L0663: 1, H0689: 1, H0521: 1, S0027: 1, L0748: 1, L0777: 1, L0752: 1, L0755: 1, L0731: 1, H0445: 1 and H0423: 1.	H0556: 4, H0253: 4, H0620: 4, L0731: 3, S0212: 2, H0052: 2, H0124: 2, L0766: 2, L0809: 2, L0565: 2, S0126: 2, S0328: 2, L0603: 2, H0739: 1, S0114: 1, S0218: 1, H0657: 1, S0116: 1, H0638: 1, S0420: 1, S0045: 1, S0046: 1, S0278: 1, H0549: 1, H0550: 1, H0250: 1, H0156: 1, L0738: 1, H0327: 1, H0544: 1, L0471: 1, H0083: 1,				
	Ser-26 to Ile-35.	2785	147 - 617	610	1025359	HLIBM71

| HNOKW27 | 1025366 | 611 | 3 - 701 | 2786 | Phe-9 to Trp-14, Arg-125 to Asp-148, Ser-156 to Asp-163, Pro-206 to His-211. | H0355: 1, H0416: 1, H0428: 1, L0483: 1, H0181: 1, H0617: 1, H0032: 1, S0364: 1, H0063: 1, H0087: 1, H0264: 1, H0100: 1, H0494: 1, H0560: 1, L0065: 1, H0132: 1, H0131: 1, S0150: 1, H0647: 1, L0770: 1, L0769: 1, L0772: 1, L0764: 1, L0662: 1, L0387: 1, L0657: 1, L0658: 1, L0541: 1, S0052: 1, H0547: 1, H0539: 1, S0406: 1, H0478: 1, H0727: 1, H0732: 1, S0032: 1, L0439: 1, L0740: 1, L0747: 1, L0779: 1, L0755: 1, L0757: 1, L0758: 1, L0759: 1, S0434: 1, S0436: 1, L0581: 1, L0595: 1, H0665: 1, H0423: 1 and S0446: 1. L0439: 2, H0687: 1, L0761: 1, L0805: 1, L0438: 1 and H0670: 1. |

HPFDG48	1025526	612	461 - 303	2787		AR089: 2, AR039: 2, AR104: 2, AR053: 2, AR096: 2, AR060: 1, AR033: 1, AR061: 1, AR055: 1 L0748: 6, H0169: 1, S0428: 1, S0136: 1, L0754: 1 and L0749: 1.	Xp11.23-p11.22	300008, 300008, 300008, 300008, 300047, 300071, 300110, 300600, 301000, 301000, 301830, 309470, 309500, 309610, 309850, 311050, 312060
HVVBF24	1025712	613	49 - 1296	2788	Ser-1 to Gly-18, Trp-25 to Gly-31, Arg-46 to Ser-52, Ala-103 to Ala-108, Ser-154 to Gly-165, Gln-228 to Pro-236, Ser-284 to Gly-291, Ala-321 to Asp-327, Lys-377 to Asn-394, Asp-406 to Ser-416.	AR089: 13, AR050: 5, AR096: 5, AR104: 5, AR061: 2, AR055: 1 S0152: 12, S0356: 10, H0551: 6, H0423: 6, S0212: 5, H0090: 5, H0667: 5, S0358: 4, H0620: 4, H0622: 4, H0591: 4, L0794: 4, S0380: 4, L0731: 4, L0588: 4, S0242: 4, S0360: 3, S0474: 3, H0581: 3, S0126: 3,		

557

H0436: 3, S0028: 3,
L0756: 3, H0445: 3,
S0192: 3, S0196: 3,
H0656: 2, S0116: 2,
S0442: 2, S0376: 2,
S0046: 2, H0549: 2,
H0098: 2, H0014: 2,
S0003: 2, H0560: 2,
H0641: 2, H0529: 2,
L0766: 2, H0520: 2,
H0519: 2, H0666: 2,
L0602: 2, H0478: 2,
L0740: 2, L0751: 2,
L0754: 2, S0434: 2,
L0595: 2, H0542: 2,
H0543: 2, H0624: 1,
H0170: 1, S0040: 1,
S0402: 1, S0134: 1,
H0341: 1, H0661: 1,
H0663: 1, H0449: 1,
H0638: 1, S0045: 1,
S0140: 1, L0717: 1,
H0411: 1, S0222: 1,
H0497: 1, H0486: 1,
T0040: 1, H0244: 1,
H0427: 1, H0004: 1,
H0596: 1, H0566: 1,
L0163: 1, H0051: 1,
S0051: 1, T0079: 1,
H0375: 1, H0060: 1,

S0250: 1, H0615: 1, H0029: 1, H0553: 1, H0644: 1, H0032: 1, H0169: 1, H0316: 1, H0038: 1, H0040: 1, H0634: 1, H0063: 1, T0067: 1, H0477: 1, H0488: 1, H0623: 1, H0494: 1, H0625: 1, L0065: 1, S0438: 1, H0509: 1, S0142: 1, L0770: 1, L0646: 1, L0662: 1, L0653: 1, L0776: 1, L0659: 1, L0526: 1, L0666: 1, S0374: 1, H0693: 1, H0547: 1, H0682: 1, H0435: 1, H0658: 1, H0660: 1, H0648: 1, H0672: 1, S0328: 1, H0710: 1, H0518: 1, H0579: 1, H0704: 1, H0555: 1, S0390: 1, S0037: 1, S0027: 1, L0439: 1, L0747: 1, L0752: 1, L0759: 1, H0444: 1, H0595: 1, L0362: 1, S0011: 1, S0194: 1 and S0384: 1.	H0547: 10, H0013: 9,	Ala-8 to Arg-14,	2789	4207 -	614	1025745	HE8UF88

| 2810 | Ile-64 to Thr-69,
Val-94 to Asp-101,
His-112 to Glu-117,
Tyr-139 to Glu-145,
Tyr-195 to Cys-208,
Gly-216 to Gly-223,
Asp-297 to Ser-307,
Gly-378 to Leu-383,
Ile-391 to Pro-404,
Asn-451 to Ser-466. | L0758: 8, L0771: 6,
L0747: 6, S0422: 5,
L0770: 5, H0341: 4,
S0356: 4, H0486: 4,
H0251: 4, H0038: 4,
H0040: 4, T0041: 4,
L0766: 4, S0152: 4,
L0439: 4, H0171: 3,
S0360: 3, S0046: 3,
H0574: 3, H0024: 3,
T0042: 3, S0440: 3,
H0529: 3, H0670: 3,
S0330: 3, H0539: 3,
L0754: 3, L0749: 3,
L0779: 3, H0624: 2,
S0134: 2, H0583: 2,
H0657: 2, S0116: 2,
S0418: 2, S0354: 2,
S0045: 2, H0318: 2,
T0110: 2, H0046: 2,
H0266: 2, S0003: 2,
H0591: 2, H0634: 2,
H0412: 2, H0561: 2,
L0768: 2, L0806: 2,
L0664: 2, H0144: 2,
L0565: 2, H0519: 2,
H0659: 2, H0672: 2,
S0328: 2, S0378: 2,
H0521: 2, H0696: 2,
H0345: 2, L0741: 2, |

L0743: 2, L0748: 2,
L0751: 2, L0759: 2,
L0593: 2, L0595: 2,
H0667: 2, H0136: 2,
H0423: 2, H0556: 1,
S6024: 1, H0661: 1,
H0663: 1, S0444: 1,
S0278: 1, H0592: 1,
H0587: 1, H0497: 1,
H0333: 1, I0492: 1,
H0427: 1, S0280: 1,
H0575: 1, S0474: 1,
H0596: 1, H0546: 1,
H0123: 1, H0050: 1,
L0471: 1, H0373: 1,
L0163: 1, H0051: 1,
H0083: 1, H0687: 1,
H0328: 1, H0688: 1,
H0622: 1, T0006: 1,
H0169: 1, H0674: 1,
H0708: 1, H0598: 1,
H0616: 1, H0258: 1,
H0623: 1, H0100: 1,
L0475: 1, S0438: 1,
S0150: 1, H0646: 1,
L0369: 1, L0763: 1,
L0638: 1, L0646: 1,
L0773: 1, L0521: 1,
L0662: 1, L0794: 1,
L0522: 1, L0803: 1,

						Clones
						L0774: 1, L0775: 1, L0776: 1, L0655: 1, L0527: 1, L0558: 1, L0659: 1, L0526: 1, L0789: 1, L0666: 1, H0520: 1, H0689: 1, H0690: 1, H0683: 1, H0660: 1, H0648: 1, S0380: 1, S0406: 1, H0478: 1, H0626: 1, S0027: 1, S0028: 1, L0740: 1, L0786: 1, L0757: 1, S0434: 1, L0596: 1, L0592: 1, S0026: 1, H0542: 1, H0543: 1, S0412: 1, S0424: 1, S0384: 1, S0456: 1 and L0600: 1.
HOUBC29	1025749	615	1558 - 1259	2790	Leu-11 to Gly-22, Ala-87 to Gly-96.	L0748: 2, L0745: 2, S0040: 1, H0637: 1, H0580: 1, H0553: 1 and L0761: 1.
HOCPY47	1025965	616	71 - 1606	2791		L0758: 9, S0412: 8, L0749: 6, S0360: 5, H0038: 5, L0662: 5, L0751: 5, S0356: 3, H0618: 3, S0051: 3, H0616: 3, L0666: 3, L0743: 3, L0439: 3, L0731: 3, H0295: 2.

H0587: 2, H0135: 2,
H0591: 2, L0769: 2,
L0774: 2, L0775: 2,
L0659: 2, L0665: 2,
H0672: 2, S0330: 2,
H0539: 2, H0436: 2,
L0754: 2, L0588: 2,
L0605: 2, H0352: 2,
T0002: 1, H0381: 1,
S0116: 1, H0341: 1,
H0638: 1, H0339: 1,
L0717: 1, H0411: 1,
H0441: 1, H0586: 1,
H0333: 1, H0574: 1,
S0280: 1, L0021: 1,
H0253: 1, S0010: 1,
S0346: 1, S0049: 1,
H0085: 1, L0471: 1,
H0024: 1, T0010: 1,
H0239: 1, H0030: 1,
H0031: 1, H0181: 1,
H0032: 1, H0361: 1,
H0598: 1, H0090: 1,
H0100: 1, H0529: 1,
L0637: 1, L0772: 1,
L0646: 1, L0764: 1,
L0771: 1, L0648: 1,
L0521: 1, L0767: 1,
L0766: 1, L0375: 1,
L0378: 1, L0653: 1,

HOVKE20	1025990	617	3 - 824	2792	Gln-52 to Thr-58, Pro-105 to Asp-111, Arg-175 to Cys-182, Leu-221 to Val-227, Thr-257 to Gly-264, Ser-266 to Glu-271.	19p13	H0618: 12, H0253: 11, L0777: 8, L0755: 8, L0794: 6, L0659: 6, L0758: 6, S0192: 5, L0743: 4, S0418: 3, L0764: 3, S3014: 3, L0744: 3, S0420: 2, S0046: 2, S0132: 2, H0333: 2, H0486: 2, H0599: 2, T0023: 2, L0774: 2, L0375: 2, H0555: 2, L0754: 2, L0749: 2, L0756: 2, L0731: 2, H0265: 1, H0295: 1, S0298: 1, S0212: 1, H0255: 1, H0661: 1, S0358: 1, H0580: 1, H0645: 1, H0549: 1, H0497: 1, L0657: 1, L0544: 1, L0047: 1, H0435: 1, H0659: 1, H0658: 1, H0670: 1, H0660: 1, H0521: 1, H0696: 1, H0555: 1, H0478: 1, S0037: 1, S0027: 1, L0756: 1, L0777: 1, L0753: 1, I0445: 1, L0596: 1, L0591: 1, S0026: 1 and S0446: 1.	601011, 601011, 601011, 601011, 601768, 601843

H0492: 1, T0040: 1, H0505: 1, H0545: 1, H0150: 1, H0086: 1, H0123: 1, H0023: 1, H0024: 1, H0014: 1, H0051: 1, H0028: 1, H0615: 1, H0688: 1, H0424: 1, H0031: 1, H0617: 1, H0059: 1, H0494: 1, H0538: 1, L0769: 1, L0637: 1, L0667: 1, L0772: 1, L0804: 1, L0806: 1, L0526: 1, L0809: 1, S0030: 1, S0454: 1, S0027: 1, S0028: 1, L0741: 1, L0740: 1, L0747: 1, L0752: 1, L0757: 1, H0665: 1, S0042: 1 and H0506: 1.	H0666: 13, H0620: 7, L0731: 7, L0747: 6, L0659: 5, L0740: 5, L0750: 5, L0757: 5, S0360: 4, H0123: 4, S0022: 4, H0135: 4, L0666: 4, L0665: 4, S0028: 4, L0748: 4, L0777: 4, L0588: 4, S0420: 3, S0358: 3,		
	2793	398 - 1024	618	1026139
	HODGH47			

565

H0208: 3, H0545: 3,
H0046: 3, H0284: 3,
L0650: 3, L0375: 3,
L0382: 3, H0352: 3,
H0592: 2, H0544: 2,
H0024: 2, H0266: 2,
H0286: 2, H0252: 2,
H0615: 2, H0428: 2,
H0628: 2, H0551: 2,
H0100: 2, S0210: 2,
L0763: 2, L0770: 2,
L0774: 2, L0661: 2,
L0518: 2, H0547: 2,
H0670: 2, S0037: 2,
L0751: 2, L0752: 2,
L0755: 2, L0758: 2,
L0601: 2, S0194: 2,
H0170: 1, H0265: 1,
H0686: 1, S0040: 1,
H0295: 1, H0341: 1,
H0638: 1, S0444: 1,
H0580: 1, H0329: 1,
S0468: 1, S0046: 1,
S0132: 1, S0476: 1,
H0619: 1, H0645: 1,
L0717: 1, S0278: 1,
H0550: 1, H0586: 1,
H0333: 1, L0021: 1,
H0575: 1, H0253: 1,
H0052: 1, H0150: 1,

					Mutations	Clones
HODBK27	1026372	619	87 - 497	2794		H0041: 1, H0563: 1, H0081: 1, H0050: 1, L0163: 1, H0051: 1, H0688: 1, H0040: 1, H0634: 1, H0272: 1, H0334: 1, H0633: 1, H0646: 1, L0772: 1, L0800: 1, L0643: 1, L0764: 1, L0662: 1, L0767: 1, L0775: 1, L0651: 1, L0806: 1, L0805: 1, L0776: 1, L0656: 1, L0783: 1, L0809: 1, L0543: 1, L0789: 1, L0663: 1, H0682: 1, H0684: 1, H0659: 1, H0660: 1, H0709: 1, S0152: 1, H0436: 1, H0627: 1, L0611: 1, S0027: 1, L0439: 1, L0745: 1, L0759: 1, L0593: 1, L0361: 1, L0603: 1, H0668: 1, S0026: 1 and H0667: 1. H0328: 2, H0656: 1 and H0538: 1.
HE8CHS9	1026805	620	1889 - 2770	2795	Tyr-1 to Pro-8, Asp-21 to Lys-28, Arg-30 to Ile-38	H0583: 2, L0744: 2, L0747: 2, H0650: 1, H0656: 1, S0356: 1,

					Asn-71 to Gln-76, Val-85 to Pro-101, Ser-104 to Arg-111, His-123 to Arg-128, Glu-146 to Arg-152, Val-155 to Asp-271, Leu-274 to Gly-279, Ser-283 to Glu-290.	H0013: 1, H0590: 1, H0581: 1, H0251: 1, H0266: 1, H0328: 1, H0615: 1, H0135: 1, H0488: 1, H0538: 1, L0521: 1, H0539: 1, H0522: 1, S0028: 1, L0366: 1 and H0677: 1.
HSKGR52	1026911	621	2 - 625	2796	Asn-53 to Arg-58, Asp-79 to Tyr-89, Pro-98 to Pro-108, Lys-195 to Lys-200.	AR052: 91, AR096: 79, AR053: 69, AR039: 64, AR089: 46, AR060: 39, AR033: 35, AR104: 32, AR055: 14, AR061: 10 L0805: 22, L0794: 15, L0766: 12, L0747: 12, L0803: 11, L0740: 11, L0779: 11, L0776: 9, L0769: 7, H0521: 7, L0439: 7, L0731: 7, L0605: 7, S0474: 6, S0422: 6, L0752: 6, L0665: 5, L0748: 5, L0758: 5, H0618: 4, S0010: 4, L0771: 4, L0789: 4, S3014: 4, H0341: 3, H0615: 3, H0708: 3, L0763: 3, L0804: 3, L0659: 3, L0809: 3, S0052: 3,

L0438: 3, H0658: 3, H0436: 3, L0759: 3, S0360: 2, S0222: 2, L0574: 2, H0599: 2, H0196: 2, H0050: 2, H0266: 2, H0135: 2, H0038: 2, H0616: 2, L0770: 2, H0144: 2, S0374: 2, L0352: 2, H0682: 2, H0670: 2, L0743: 2, L0744: 2, L0751: 2, L0749: 2, L0750: 2, L0756: 2, S0424: 2, H0624: 1, T0002: 1, T0049: 1, H0657: 1, L0785: 1, H0671: 1, S0442: 1, S0444: 1, S0408: 1, H0733: 1, S0278: 1, H0431: 1, H0013: 1, S0280: 1, H0581: 1, S0049: 1, H0052: 1, H0025: 1, L0040: 1, H0123: 1, L0471: 1, H0630: 1, H0375: 1, S0003: 1, H0252: 1, L0483: 1, T0006: 1, H0644: 1, H0673: 1, S0036: 1, H0163: 1, H0040: 1, H0551: 1,

| HMUAQ05 | 1026913 | 622 | 3 - 218 | 2797 | Pro-2 to Pro-8. | H0412: 1, H0413: 1, S0038: 1, H0509: 1, H0131: 1, S0344: 1, L0598: 1, L0369: 1, L0638: 1, L0667: 1, L0662: 1, L0363: 1, L0768: 1, L0775: 1, L0375: 1, L0806: 1, L0653: 1, L0655: 1, L0666: 1, S0126: 1, H0689: 1, H0684: 1, H0660: 1, H0672: 1, S0380: 1, H0710: 1, H0522: 1, S0146: 1, S3012: 1, S0027: 1, S0028: 1, L0745: 1, L0780: 1, L0753: 1, H0445: 1, L0362: 1, L0361: 1, H0653: 1, H0423: 1 and H0506: 1. S0354: 2, H0615: 2, L0591: 2, S0356: 1, S0442: 1, S0360: 1, S0222: 1, H0362: 1, H0156: 1, H0036: 1, H0012: 1, H0014: 1, S0051: 1, T0010: 1, H0529: 1, S0126: 1, L0439: 1, L0755: 1 and L0608: 1. |

HCOMA45	1026979	623	536 - 447	2798			
HE2KI45	1027007	624	3 - 1565	2799	Glu-13 to Gly-18.	H0662: 1, S0046: 1, H0658: 1 and H0670: 1. L0803: 12, H0581: 8, S0358: 6, H0046: 6, H0428: 6, S0356: 5, S0007: 5, H0031: 4, L0665: 4, H0271: 3, H0038: 3, L0794: 3, L0804: 3, L0666: 3, H0693: 3, S0406: 3, L0756: 3, L0758: 3, L0592: 3, S0116: 2, S0444: 2, H0431: 2, H0586: 2, H0486: 2, L0471: 2, H0615: 2, H0039: 2, S0036: 2, H0616: 2, S0422: 2, H0529: 2, L0770: 2, L0521: 2, L0662: 2, L0776: 2, L0787: 2, L0438: 2, H0670: 2, H0660: 2, S0328: 2, S0330: 2, H0436: 2, L0748: 2, L0755: 2, L0485: 2, L0599: 2, S0192: 2, H0423: 2, L0624: 1, S0342: 2, S0114: 1, H0650: 1, H0657: 1, H0638: 1, S0354: 1, S0360: 1,	1

S0408: 1, S0410: 1,
H0329: 1, S0045: 1,
S0046: 1, S0278: 1,
H0441: 1, H0497: 1,
H0331: 1, T0109: 1,
S0280: 1, H0705: 1,
H0118: 1, S0474: 1,
T0110: 1, H0565: 1,
H0572: 1, H0050: 1,
H0687: 1, S0003: 1,
H0553: 1, H0488: 1,
H0412: 1, T0041: 1,
H0494: 1, S0438: 1,
S0440: 1, S0144: 1,
H0517: 1, L0763: 1,
L0772: 1, L0372: 1,
L0800: 1, L0764: 1,
L0364: 1, L0649: 1,
L0774: 1, L0523: 1,
L0805: 1, L0655: 1,
L0807: 1, L0527: 1,
L0659: 1, L0809: 1,
L0663: 1, L0664: 1,
S0428: 1, S0053: 1,
H0144: 1, S0374: 1,
H0520: 1, H0519: 1,
S0126: 1, H0682: 1,
H0435: 1, H0648: 1,
H0672: 1, S0378: 1,
H0521: 1, S0044: 1,

HODDO66	1027207	625	2 - 136	2800		H0478: 1, H0627: 1, H0631: 1, S0027: 1, L0740: 1, L0747: 1, L0749: 1, L0777: 1, L0752: 1, H0445: 1, S0436: 1, L0591: 1, S0196: 1, H0543: 1, S0424: 1, S0462: 1, S0446: 1 and H0506: 1.	2p11.2	178640, 216900
HVVAT45	1027269	626	71 - 1117	2801	Pro-1 to Leu-8, Arg-41 to Gly-48, Ile-73 to Cys-80, Ala-137 to Tyr-144, Lys-193 to Ala-208, Leu-254 to Leu-259, Ala-317 to Ala-323, Glu-343 to Phe-349.	H0667: 3, S0222: 2, H0013: 2, L0438: 2, H0265: 1, H0583: 1, S0280: 1, H0036: 1, H0318: 1, L0471: 1, H0266: 1, H0328: 1, H0553: 1, S0364: 1, H0038: 1, H0040: 1, H0488: 1, L0796: 1, H0144: 1, H0684: 1 and H0423: 1.		
HVCAG18	1027484	627	1 - 393	2802	Leu-46 to Thr-53, Pro-80 to Ser-86,	H0690: 1, H0683: 1, H0666: 1 and S0328: 1.	20q12-q13.2	118504, 118504,

| HPTXK72 | 1027486 | 628 | 52 - 462 | 2803 | Leu-52 to Thr-59, Pro-86 to Ser-92, Arg-107 to Gly-118, Lys-121 to Gly-128. | L0751: 29, H0549: 17, H0550: 17, L0666: 9, L0747: 8, H0689: 7, H0690: 7, H0682: 7, H0615: 6, H0670: 6, H0328: 5, H0150: 4, H0660: 4, S0330: 4, S0044: 4, L0362: 4, H0597: 3, H0688: 3, L0764: 3, L0657: 3, L0809: 3, L0753: 3, L0758: 3, L0759: 3, H0431: 2, H0046: 2, T0067: 2, H0059: 2, H0647: 2, L0774: 2, L0805: 2, L0783: 2, L0438: 2, H0593: 2, H0648: 2, H0672: 2, S0328: 2, S0404: 2, L0744: 2, L0779: 2, S0436: 2, H0662: 1, S0442: 1, S0444: 1, | | Arg-101 to Gly-112, Lys-115 to Gly-122. | 131242, 139320, 139320, 139320, 139320, 600281, 600281, 602025 |

HHSGW78	1028405	629	150 - 404	2804	S0408: 1, S0007: 1, H0461: 1, H0085: 1, H0009: 1, S0024: 1, H0188: 1, H0039: 1, H0604: 1, H0424: 1, H0169: 1, H0674: 1, L0520: 1, L5569: 1, L0803: 1, L0804: 1, L0775: 1, L0658: 1, L0634: 1, L0542: 1, L0528: 1, L2269: 1, L0663: 1, L0665: 1, H0684: 1, H0659: 1, H0658: 1, S0380: 1, S0406: 1, H0555: 1 and L0780: 1.	
HDTLR06	1029191	630	3 - 1013	2805	H0306: 1 and S0388: 1,5q11.1 AR053: 5, AR089: 5, AR096: 4, AR039: 4, AR060: 3, AR104: 2, AR055: 2, AR033: 2, AR061: 1 L0731: 15, L0754: 14, H0616: 9, L0766: 8, L0758: 8, L0777: 7, H0266: 5, L0752: 5, S0358: 4, S0422: 4, L0518: 4, H0547: 4, S0406: 4, H0013: 3,	253200, 600887

| H0581: 3, H0545: 3, |
| H0083: 3, S0003: 3, |
| L0662: 3, L0776: 3, |
| H0659: 3, L0439: 3, |
| L0753: 3, S0434: 3, |
| L0465: 3, H0171: 2, |
| H0580: 2, H0486: 2, |
| H0318: 2, L0471: 2, |
| H0428: 2, H0553: 2, |
| H0032: 2, H0038: 2, |
| H0634: 2, H0551: 2, |
| S0438: 2, L0764: 2, |
| L0804: 2, L0655: 2, |
| L0664: 2, S0374: 2, |
| H0684: 2, H0672: 2, |
| H0651: 2, H0518: 2, |
| L0740: 2, L0756: 2, |
| L0362: 2, L0603: 2, |
| H0170: 1, H0686: 1, |
| S0040: 1, H0583: 1, |
| H0657: 1, S0212: 1, |
| S0282: 1, S0420: 1, |
| S0356: 1, S0442: 1, |
| L0717: 1, H0411: 1, |
| H0600: 1, H0587: 1, |
| H0257: 1, T0039: 1, |
| H0069: 1, S0280: 1, |
| H0575: 1, H0036: 1, |
| H0590: 1, L0105: 1, |
| S0049: 1, H0570: 1, |

H0050: 1, H0014: 1,
H0373: 1, S0051: 1,
H0510: 1, H0328: 1,
H0688: 1, H0031: 1,
H0644: 1, H0040: 1,
H0063: 1, H0488: 1,
L0475: 1, S0440: 1,
H0641: 1, H0649: 1,
H0652: 1, H0529: 1,
L0369: 1, L0762: 1,
L0763: 1, L0767: 1,
L0649: 1, L0803: 1,
L0650: 1, L0806: 1,
L0805: 1, L0607: 1,
L0657: 1, L0783: 1,
L0809: 1, L0530: 1,
L0793: 1, L0666: 1,
L0665: 1, S0148: 1,
S0126: 1, H0683: 1,
H0658: 1, H0670: 1,
H0660: 1, S0380: 1,
S0152: 1, S0454: 1,
H0521: 1, H0696: 1,
S0188: 1, S0392: 1,
H0626: 1, S0390: 1,
L0759: 1, H0444: 1,
S0308: 1, S0026: 1,
H0667: 1, S0194: 1,
H0542: 1, H0543: 1,
S0412: 1 and H0506: 1.

WO 02/00677   PCT/US01/18569

HPAMG11	1029484	631	1328 - 663	2806	Pro-32 to Lys-38, Ser-201 to Pro-211, Glu-217 to Glu-222.	H0413: 2, H0556: 1, H0638: 1, S0376: 1, H0457: 1, H0009: 1, H0519: 1, H0682: 1, H0672: 1, L0748: 1, L0759: 1 and H0445: 1.
HSDJR27	1030870	632	1758 - 622	2807	Gln-8 to Arg-27, Val-34 to Asn-39, Tyr-65 to Gly-75, Glu-80 to Lys-87, Thr-207 to Gly-218, Thr-245 to Gln-250, Leu-256 to Thr-263, Leu-273 to Thr-281, Lys-289 to Leu-296, Ser-323 to Asn-330.	L0665: 3, L0777: 3, L0717: 2, L0776: 2, L0438: 2, L0756: 2, L0752: 2, S0116: 1, H0661: 1, H0339: 1, H0549: 1, H0587: 1, H0688: 1, H0553: 1, L0351: 1, S0422: 1, L0437: 1, L0769: 1, L0637: 1, L0771: 1, L0662: 1, L0794: 1, L0766: 1, L0655: 1, L0787: 1, L0789: 1, L0664: 1, L0352: 1, L0659: 1, L0748: 1, L0754: 1, L0779: 1, L0731: 1, L0758: 1, S0260: 1, L0480: 1, L0596: 1 and L0608: 1.
HOCPL33	1030871	633	1032 - 571	2808	Asp-1 to Gly-6, Pro-14 to Trp-35, Arg-37 to Gly-45, Ser-63 to Pro-72, Pro-87 to Arg-100,	L0770: 4, L0439: 4, L0438: 3, H0670: 3, L0748: 3, L0740: 3, H0538: 2, L0777: 2, S0342: 1, S0110: 1,

| Pro-102 to Gly-107. | S0354: 1, S0444: 1, S0360: 1, H0729: 1, H0728: 1, H0734: 1, H0619: 1, H0549: 1, H0550: 1, H0587: 1, H0427: 1, H0253: 1, H0023: 1, T0010: 1, H0039: 1, H0674: 1, I0135: 1, H0488: 1, H0494: 1, S0015: 1, H0647: 1, S0210: 1, L0763: 1, L0800: 1, L0644: 1, L0521: 1, L0768: 1, L0775: 1, L0805: 1, L0659: 1, L0782: 1, L0783: 1, L0528: 1, L0789: 1, L0791: 1, L0793: 1, L0532: 1, H0725: 1, H0659: 1, H0658: 1, H0660: 1, S0013: 1, S0037: 1, S0206: 1, L0751: 1, L0605: 1, L0485: 1, L0599: 1 and S0026: 1. | L0803: 4, L0777: 4, L0758: 4, L0804: 3, L0659: 3, L0752: 3, S0408: 2, L0717: 2, L0598: 2, L0770: 2, | 2809 | 86 - 2158 | 634 | 1030963 | HPCQN80 |

L0662: 2, L0661: 2,
L0657: 2, L0526: 2,
L0664: 2, H0659: 2,
H0648: 2, L0748: 2,
L0751: 2, L0749: 2,
L0779: 2, S0040: 1,
H0713: 1, S0356: 1,
S0442: 1, S0360: 1,
H0393: 1, H0351: 1,
H0441: 1, H0486: 1,
H0581: 1, H0123: 1,
H0050: 1, S0051: 1,
H0673: 1, S0438: 1,
S0144: 1, L0520: 1,
L0763: 1, L0371: 1,
L0637: 1, L5566: 1,
L0800: 1, L0764: 1,
L0773: 1, L0649: 1,
L0381: 1, L0774: 1,
L0375: 1, L0806: 1,
L0653: 1, L0776: 1,
L0809: 1, L0530: 1,
L0788: 1, L0666: 1,
H0521: 1, H0555: 1,
S0032: 1, L0740: 1,
L0745: 1, L0750: 1,
L0756: 1, L0757: 1,
L0591: 1, L0581: 1 and
H0506: 1.

L0766: 6, L0804: 5,

| 2810 | 1561 - | 635 | 1031076 | HODE22 |

		1307				L0748: 5, L0666: 4, L0663: 4, L0634: 3, L0740: 3, H0445: 3, H0318: 2, H0046: 2, H0615: 2, H0428: 2, L0761: 2, L0775: 2, L0665: 2, H0658: 2, H0583: 1, H0656: 1, S0001: 1, I0637: 1, H0090: 1, H0038: 1, S0002: 1, L0520: 1, L0638: 1, L0649: 1, L0527: 1, L0657: 1, L0559: 1, L0647: 1, L0664: 1, S0052: 1, S0428: 1, H0682: 1, H0660: 1, H0555: 1 and L0751: 1.			107730, 107730, 107730, 107730, 182601, 602134
HODFZI6	1031085	636	340 - 498	2811	Phe-3 to Ala-23.	L0766: 2, L0748: 2, S0116: 1, L0005: 1, H0615: 1, H0529: 1, L0792: 1 and H0521: 1.	2p24	
HWGAE28	1031316	637	1 - 2271	2812	Cys-1 to Arg-6, Thr-84 to Thr-97, Arg-131 to Trp-136, Ser-155 to Gly-160, Thr-187 to Glu-201.	L0439: 9, H0519: 6, L0665: 5, H0547: 5, L0755: 5, S0434: 5, H0529: 4, L0659: 4, S0358: 3, S0010: 3, L0731: 3, L0599: 3, L0595: 3, H0422: 3, L0657: 2, H0581: 2,		

H0251: 2, L0471: 2,
H0510: 2, H0031: 2,
L0763: 2, L0646: 2,
L0662: 2, L0775: 2,
L0809: 2, L0647: 2,
H0436: 2, L0754: 2,
L0758: 2, L0759: 2,
L0605: 2, S0424: 2,
H0624: 1, L0615: 1,
H0341: 1, H0662: 1,
S0418: 1, L0005: 1,
S0360: 1, S0410: 1,
S0046: 1, H0415: 1,
H0600: 1, H0587: 1,
H0642: 1, H0486: 1,
H0250: 1, H0156: 1,
H0546: 1, H0041: 1,
S6028: 1, H0266: 1,
S0334: 1, S0250: 1,
T0006: 1, L0455: 1,
H0708: 1, H0551: 1,
H0059: 1, H0100: 1,
L0370: 1, H0429: 1,
H0494: 1, S0352: 1,
S0370: 1, S0150: 1,
H0641: 1, L0369: 1,
L0520: 1, L0770: 1,
L0638: 1, L0772: 1,
L0641: 1, L0521: 1,
L0794: 1, L0803: 1,

HOFNZ21	1031328	638	109 - 456	2813	Arg-1 to Gly-6.	L0804: 1, L0650: 1, L0654: 1, L0661: 1, L0656: 1, L0526: 1, L0790: 1, L0666: 1, L0565: 1, H0520: 1, H0690: 1, H0435: 1, H0659: 1, H0670: 1, H0660: 1, H0696: 1, H0704: 1, S0406: 1, H0555: 1, S3014: 1, S0028: 1, L0740: 1, L0779: 1, L0777: 1, L0780: 1, L0592: 1, L0608: 1, L0362: 1, L0665: 1, S0194: 1, H0542: 1, H0423: 1 and L0465: 1. H0415: 2	9p13-p12	230400, 250250
HOOKH25	1031329	639	231 - 2696	2814	Ala-4 to Glu-13, Ala-21 to Asp-27, Lys-34 to Asn-40, Asp-91 to Ile-98, Pro-122 to Lys-128, Arg-160 to Gly-165, Glu-203 to Ser-213, Gly-218 to Cys-225, Ser-298 to Lys-304, Glu-307 to Asn-312, Pro-327 to His-333,	L0747: 8, L0659: 7, L0776: 5, L0770: 4, L0662: 4, L0768: 4, L0775: 4, L0752: 4, L0603: 4, H0556: 3, S0410: 3, L0665: 3, L0439: 3, L0750: 3, S0356: 2, S0408: 2, L0471: 2, H0271: 2, S0440: 2, L0762: 2, L0769: 2, L0372: 2,	9p13-p12	230400, 250250

Thr-363 to Ser-368,	L0646: 2,	L0764: 2,
Arg-375 to Val-383,	L0773: 2,	L0766: 2,
Asp-500 to Leu-505,	L0649: 2,	L0655: 2,
Arg-602 to Asp-608,	L0663: 2,	L0664: 2,
Glu-722 to Ser-734,	H0144: 2,	L0565: 2,
Glu-739 to Val-744,	H0547: 2,	H0690: 2,
Glu-746 to His-751,	H0659: 2,	L0602: 2,
Leu-778 to Phe-784,	S0404: 2,	L0754: 2,
Pro-790 to Gly-795,	L0749: 2,	L0777: 2,
Ala-797 to Thr-807,	L0758: 2,	L0596: 2,
Tyr-812 to Tyr-821.	H0657: 1,	S0001: 1,
	H0484: 1,	H0638: 1,
	S0418: 1,	S0444: 1,
	L0717: 1,	H0333: 1,
	H0156: 1,	H0052: 1,
	H0545: 1,	H0012: 1,
	H0083: 1,	H0687: 1,
	H0674: 1,	H0090: 1,
	H0063: 1,	H0264: 1,
	H0100: 1,	L0434: 1,
	L0351: 1,	H0494: 1,
	H0561: 1,	S0466: 1,
	H0641: 1,	H0529: 1,
	L0763: 1,	L0761: 1,
	L0667: 1,	L0363: 1,
	L0650: 1,	L0653: 1,
	L0654: 1,	L0379: 1,
	L0607: 1,	L0807: 1,
	L0635: 1,	L0783: 1,
	L0383: 1,	L0809: 1,

HDTIL75	1031435	640	1 - 1092	2815	Gly-1 to Arg-6, Glu-26 to Gly-31, Gln-70 to Trp-75.	S0410: 8, H0620: 5, H0012: 2, S0040: 1, S0358: 1, S0132: 1, H0486: 1, H0706: 1, H0031: 1, H0628: 1, H0316: 1, S0036: 1, H0090: 1, H0038: 1, H0131: 1, S0144: 1, L0774: 1, L0789: 1, L0666: 1, H0144: 1, L0438: 1, H0435: 1, H0672: 1, S0328: 1, H0539: 1, L0731: 1, S0436: 1 and H0665: 1.	L0666: 1, H0658: 1, H0670: 1, H0648: 1, H0521: 1, S0406: 1, L0748: 1, L0731: 1, L0593: 1, L0595: 1, S0026: 1, S0276: 1 and H0422: 1.
HPRSB55	1031451	641	3 - 1751	2816	Cys-18 to Lys-24, Gly-57 to Gly-63, Lys-72 to Ile-81, Cys-88 to Glu-93, Gly-97 to Glu-116, Thr-121 to Val-129, Lys-137 to Lys-150, Lys-156 to Asp-161, Gly-177 to Leu-182,	L0766: 4, L0758: 4, L0773: 3, L0748: 3, L0751: 3, L0731: 3, L0759: 3, H0171: 3, H0013: 2, H0644: 2, H0616: 2, H0633: 2, L0805: 2, L0659: 2, L0666: 2, L0665: 2, L0754: 2, L0779: 2,	

HPDPY36	1031606	642	482 - 757	2817	Glu-213 to Leu-229, Asp-275 to Arg-281, Asp-287 to Trp-299, Lys-302 to Arg-316, Leu-338 to Ser-343.	S6024: 1, S0212: 1, S0554: 1, S0046: 1, T0039: 1, H0599: 1, H0575: 1, H0036: 1, T0110: 1, H0046: 1, H0050: 1, L0471: 1, H0355: 1, H0271: 1, H0687: 1, H0553: 1, H0166: 1, H0212: 1, H0211: 1, I0264: 1, H0272: 1, H0100: 1, H0494: 1, S0002: 1, L0637: 1, L0627: 1, L0645: 1, L0764: 1, L0803: 1, L0774: 1, L0653: 1, L0606: 1, L0790: 1, L0664: 1, H0435: 1, H0660: 1, H0648: 1, H0521: 1, L0439: 1, L0747: 1, L0749: 1, L0750: 1, L0752: 1 and L0596: 1.	12
HETFJ47	1031922	643	3 - 1328	2818	Pro-33 to Pro-40, Pro-47 to Met-56.	L0471: 1, H0617: 1, L0761: 1, L0768: 1, H0658: 1, L0754: 1 and L0779: 1.	AR060: 4, AR089: 2, AR061: 1, AR096: 1, AR033: 0, AR039: 0, AR053: 0, AR052: 0

L0596: 7, H0622: 5,
L0747: 5, H0046: 4,
L0372: 4, L0764: 3,
L0662: 3, L0657: 3,
L0783: 3, L0663: 3,
L0752: 3, H0662: 2,
S0356: 2, H0040: 2,
H0538: 2, L0646: 2,
L0771: 2, L0774: 2,
L0805: 2, L0809: 2,
L0666: 2, L0665: 2,
H0435: 2, H0672: 2,
L0748: 2, L0751: 2,
L0777: 2, L0608: 2,
H0624: 1, H0686: 1,
H0295: 1, H0241: 1,
S0418: 1, S0358: 1,
S0376: 1, S0360: 1,
S0132: 1, H0642: 1,
H0590: 1, H0150: 1,
H0620: 1, H0023: 1,
H0356: 1, H0424: 1,
H0213: 1, H0617: 1,
H0169: 1, H0634: 1,
H0063: 1, T0067: 1,
H0488: 1, H0334: 1,
S0370: 1, S0440: 1,
H0652: 1, L0645: 1,
L0773: 1, L0648: 1,
L0806: 1, L0776: 1,

	HMAMI21	1031988	644	14 - 1222	2819	L0541: 1, L0789: 1, L0790: 1, L0664: 1, S0374: 1, H0689: 1, H0666: 1, H0478: 1, L0779: 1, S0436: 1, H0506: 1 and H0712: 1. AR096: 10, AR089: 10, AR060: 7, AR104: 6, AR033: 5, AR053: 5, AR039: 4, AR061: 3, AR055: 3 L0803: 9, H0648: 5, H0046: 3, L0805: 3, L0731: 3, S0444: 2, S0360: 2, S0476: 2, H0597: 2, H0412: 2, L0764: 2, L0809: 2, H0670: 2, L0740: 2, L0747: 2, L0756: 2, L0777: 2, S0040: 1, T0049: 1, S0420: 1, S0358: 1, S0376: 1, H0580: 1, L0152: 1, S0045: 1, S0278: 1, H0261: 1, S0280: 1, H0618: 1, H0012: 1, H0266: 1, H0488: 1, H0268: 1, S0144: 1, S0344: 1, S0426: 1, L0638: 1, L0646: 1.

HCOQQ85	1032475	645	343 - 672	2820	Arg-37 to Ser-44, Leu-68 to Lys-73, Val-77 to Lys-84, Glu-98 to Lys-110.	1q21

L0794: 1, L0804: 1,
L0774: 1, L0666: 1,
L0664: 1, L0665: 1,
S0052: 1, S0374: 1,
H0658: 1, H0651: 1,
S0028: 1, L0779: 1,
L0780: 1, L0755: 1,
L0759: 1, H0445: 1 and
S0276: 1.

L0775: 9, S0126: 9,
L0747: 9, H0617: 7,
L0750: 7, L0731: 7,
H0670: 5, L0740: 5,
L0770: 4, L0769: 4,
L0768: 4, L0783: 4,
L0752: 4, T0023: 3,
L0764: 3, L0653: 3,
L0776: 3, H0672: 3,
S0046: 2, T0039: 2,
H0318: 2, H0251: 2,
H0545: 2, H0012: 2,
H0373: 2, S0388: 2,
H0266: 2, H0087: 2,
H0100: 2, H0280: 2,
L0368: 2, L0753: 2,
L0755: 2, L0757: 2,
H0595: 2, L0590: 2,
L0592: 2, S6024: 1,
L0255: 1, H0664: 1,
H0177: 1, S0360: 1,

104770,
107670,
110700,
135940,
145001,
146790,
152445,
152445,
159001,
174000,
179755,
182860,
182860,
182860,
191315,
230800,
230800,
266200,
600897,
601105,
601412,

HE2DQ62	1033653	646	1515 - 796	2821		601652, 602491
				Arg-1 to Ala-7, Glu-98 to Asp-103, Glu-109 to Asp-115, Leu-141 to Glu-146, Glu-172 to Arg-180,	H0545: 3, H0046: 3, L0763: 3, L0783: 3, S0358: 2, L0769: 2, L0774: 2, L0809: 2, H0547: 2, S0126: 2,	
					S0408: 1, H0411: 1, H0298: 1, L0622: 1, T0040: 1, L0021: 1, S0049: 1, H0052: 1, H0263: 1, H0597: 1, H0620: 1, T0003: 1, L0163: 1, H0594: 1, H0252: 1, H0606: 1, H0163: 1, S0464: 1, S0438: 1, H0652: 1, L0598: 1, L0763: 1, L0773: 1, L0375: 1, L0629: 1, L0628: 1, L0659: 1, L0518: 1, L0545: 1, L0541: 1, L0788: 1, L0665: 1, H0144: 1, H0691: 1, H0682: 1, H0658: 1, H0660: 1, H0648: 1, S0330: 1, S0380: 1, S0027: 1, L0748: 1, L0754: 1, L0756: 1, L0780: 1, L0758: 1, L0759: 1, L0462: 1 and H0352: 1	

H0660: 2, H0672: 2, S0031: 2, L0588: 2, H0624: 1, H0170: 1, H0265: 1, H0556: 1, H0295: 1, H0583: 1, H0657: 1, H0662: 1, S0356: 1, S0354: 1, S0360: 1, H0637: 1, S0046: 1, L0717: 1, H0550: 1, H0013: 1, H0086: 1, H0011: 1, H0510: 1, H0494: 1, H0446: 1, H0529: 1, L0502: 1, L0770: 1, L0638: 1, L0761: 1, L0521: 1, L0528: 1, L0666: 1, L0665: 1, H0144: 1, S0374: 1, H0519: 1, H0659: 1, S0380: 1, H0704: 1, S0028: 1, L0747: 1, L0779: 1, L0777: 1, H0653: 1, S0194: 1 and S0276: 1.	S0007: 5, S0010: 1, H0617: 1 and L0769: 1.	Pro-20 to Phe-32, Pro-52 to Phe-59, Lys-68 to His-74.	2822	179 - 400	647	1034320	HEBAE89
	AR089: 31, AR053: 27, AR096: 26, AR052: 25, AR039: 16, AR060:	Pro-2 to Asp-14, Ser-71 to Thr-76, Ser-110 to Trp-119.	2823	3 - 431	648	1034471	HKDBF43

HVVCT143	1034539	649	3152 - 2838	2824	15, AR033: 13, AR104: 13, AR055: 6, AR061: 4 L0749: 4, L0471: 3, L0748: 3, L0777: 3, H0545: 2, H0561: 2, L0770: 2, L0769: 2, L0745: 2, L0779: 2, L0752: 2, L0759: 2, H0657: 1, H0663: 1, H0125: 1, S0358: 1, H0393: 1, H0411: 1, L0586: 1, H0013: 1, H0156: 1, H0083: 1, H0356: 1, H0328: 1, H0321: 1, H0551: 1, S0422: 1, L0764: 1, L0773: 1, L0804: 1, L0774: 1, L0776: 1, L0659: 1, H0547: 1, H0519: 1, H0683: 1, H0659: 1, H0648: 1, H0672: 1, S0330: 1, S3014: 1, L0731: 1, S0031: 1 and H0352: 1.
				L0666: 47, H0046: 20, H0672: 13, L0754: 11, S0003: 9, L0766: 6, L0664: 6, L0744: 5, L0439: 5, L0777: 5,

L0663: 4, H0658: 4,
L0599: 4, S0214: 3,
L0637: 3, L0521: 3,
L0804: 3, L0438: 3,
H0435: 3, L0752: 3,
S0408: 2, S0046: 2,
H0497: 2, H0590: 2,
H0050: 2, H0644: 2,
H0264: 2, T0041: 2,
S0002: 2, S0426: 2,
L0770: 2, L0794: 2,
L0775: 2, L0665: 2,
H0547: 2, S0126: 2,
H0659: 2, S0152: 2,
H0478: 2, L0786: 2,
L0779: 2, L0731: 2,
L0759: 2, L0608: 2,
H0423: 2, H0624: 1,
H0556: 1, H0686: 1,
S0342: 1, S0114: 1,
S0132: 1, H0645: 1,
S0222: 1, H0601: 1,
H0270: 1, T0114: 1,
H0013: 1, L0021: 1,
H0599: 1, H0575: 1,
H0318: 1, L0738: 1,
H0327: 1, H0014: 1,
H0373: 1, S0051: 1,
H0021: 1, H0316: 1,
H0040: 1, H0616: 1,

HTTDR30	1035435	650	609 - 1022	2825	Val-39 to Ala-45.		
						H0100: 1, I10625: 1, H0561: 1, S0440: 1, H0641: 1, S0144: 1, S0142: 1, L0598: 1, H0529: 1, L0369: 1, L0769: 1, L0646: 1, H0771: 1, L0662: 1, L0803: 1, L0774: 1, L0651: 1, L0805: 1, L0776: 1, L0659: 1, L0783: 1, L0791: 1, L0792: 1, H0519: 1, H0684: 1, H0670: 1, H0660: 1, H0648: 1, S0328: 1, H0518: 1, H0521: 1, H0522: 1, H0696: 1, H0555: 1, H0436: 1, L0758: 1, H0445: 1, L0684: 1, H0595: 1, L0588: 1, S0026: 1, H0543: 1, H0422: 1 and H0506: 1.	AR055: 8, AR060: 6, AR052: 6, AR089: 5, AR096: 5, AR053: 5, AR033: 4, AR061: 3, AR104: 2, AR039: 2 L0766: 7, H0591: 3, H0040: 3, L0794: 3, H0689: 3, L0752: 3,

594

Clone	ID		Range		Mutations		Hits
HODGO46	1035602	651	420 - 316	2826	Thr-11 to Asn-18, Gly-25 to Glu-30.	H0615: 2	H0581: 2, H0059: 2, L0771: 2, L0809: 2, L0665: 2, L0749: 2, H0637: 1, H0497: 1, T0109: 1, H0036: 1, H0318: 1, H0039: 1, H0181: 1, H0038: 1, H0634: 1, L0637: 1, L0662: 1, L0649: 1, L0388: 1, L0776: 1, L0655: 1, L0658: 1, L0788: 1, H0520: 1, H0690: 1, H0670: 1, H0672: 1, L0751: 1, L0747: 1, L0750: 1, L0777: 1, L0758: 1 and L0361: 1.
HNTTB23	1035988	652	3 - 974	2827	Pro-21 to Asn-31, Arg-158 to Lys-170, Thr-194 to Leu-200.		AR039: 2, AR096: 1, AR089: 1, AR060: 1, AR033: 1, AR061: 1, AR055: 0, AR053: 0, L0757: 3, L0594: 2, S0212: 1, L0527: 1, H0547: 1, S0328: 1 and L0756: 1.
HVVBV73	1036583	653	334 - 1299	2828	His-55 to Arg-63, Glu-96 to Val-109, Ser-113 to Ala-119.		S0278: 5, H0580: 2, H0575: 2, H0050: 2, S0344: 2, L0764: 2.

HE8MH38	1036707	654	1 - 1812	2829	Lys-140 to Tyr-150, Glu-157 to Ser-172, Gly-174 to Asn-185, Arg-223 to Pro-245, Leu-264 to Asp-272.	H0672: 2, T0002: 1, S0134: 1, H0656: 1, S0116: 1, H0706: 1, S0010: 1, H0581: 1, H0375: 1, H0030: 1, H0031: 1, H0644: 1, H0090: 1, H0087: 1, T0041: 1, S0142: 1, S0002: 1, S0426: 1, L0770: 1, L0667: 1, L0794: 1, L0803: 1, L0543: 1, H0521: 1, L0748: 1, L0749: 1, S0250: 1 and H0542: 1.
HTEPV42	1036973	655	1 - 435	2830	Gln-1 to Asp-6, Gly-11 to Ser-16, Pro-21 to Leu-41, Ser-44 to Pro-54.	H0013: 2 and S0126: 1. L0754: 6, L0758: 6, L0598: 3, L0756: 3, H0716: 2, S0358: 2, S0360: 2, S0007: 2, H0318: 2, H0052: 2, L0471: 2, H0615: 2, L0794: 2, L0766: 2, L0663: 2, H0658: 2, L0750: 2, L0731: 2, H0664: 1, H0638: 1, S0442: 1, H0741: 1, H0734: 1, H0229: 1, H0411: 1, H0415: 1, H0497: 1, H0574: 1, H0599: 1, H0108: 1.

| HFTCG52 | 1037108 | 656 | 706 - 89 | 2831 | Val-10 to Lys-17, Val-137 to Gly-142, Pro-148 to Tyr-167. | S0010: 1, S0474: 1, H0581: 1, H0050: 1, S0214: 1, H0030: 1, H0032: 1, H0113: 1, H0616: 1, T0067: 1, H0488: 1, H0059: 1, S0438: 1, H0538: 1, L0803: 1, L0805: 1, L0776: 1, L0655: 1, L0659: 1, L0809: 1, L5623: 1, L0788: 1, L0791: 1, L0793: 1, L0666: 1, H0520: 1, H0519: 1, H0684: 1, H0670: 1, H0521: 1, L0747: 1, L0749: 1, L0752: 1, L0759: 1, S0434: 1, L0596: 1, L0592: 1, L0362: 1 and H0423: 1. | AR061: 28, AR033: 25, AR104: 22, AR055: 22, AR060: 19, AR089: 19, AR052: 12, AR039: 11, AR096: 11, AR053: 8 L0751: 7, L0769: 6, L0750: 5, L0752: 5, H0052: 4, L0771: 4, L0775: 4, L0758: 4, |

H0556: 3, L0665: 3,
H0486: 2, S0010: 2,
H0620: 2, T0006: 2,
H0181: 2, H0494: 2,
L0774: 2, L0375: 2,
L0776: 2, L0512: 2,
L0659: 2, H0555: 2,
S0206: 2, L0740: 2,
L0747: 2, L0596: 2,
L0588: 2, S0276: 2,
H0624: 1, S0402: 1,
T0049: 1, H0341: 1,
H0662: 1, S0358: 1,
S0376: 1, S0360: 1,
S0045: 1, S0476: 1,
L0717: 1, H0351: 1,
S0222: 1, L0021: 1,
T0114: 1, T0048: 1,
H0618: 1, L0109: 1,
H0318: 1, H0544: 1,
H0309: 1, H0545: 1,
H0546: 1, H0545: 1,
H0009: 1, H0123: 1,
L0471: 1, H0424: 1,
H0031: 1, H0628: 1,
H0617: 1, H0063: 1,
H0059: 1, H0100: 1,
H0625: 1, H0633: 1,
H0646: 1, H0517: 1,
L0770: 1, L0764: 1,

| HKAOB40 | 1037131 | 657 | 1 - 360 | 2832 | Asp-64 to Phe-69, Thr-104 to Phe-120. | AR052: 26, AR033: 22, AR104: 15, AR053: 14, AR060: 12, AR055: 12, AR089: 11, AR096: 8, AR061: 4, AR039: 2 H0360: 14, S0408: 5, L0774: 5, L0749: 5, L0775: 4, H0648: 4, L0623: 3, H0373: 3, L0520: 3, S0328: 3, S0406: 3, S0360: 2, S0222: 2, H0575: 2, T0082: 2, L0471: 2, H0494: 2, L0763: 2, L0769: 2, L0764: 2, L0517: 2, L0809: 2, H0684: 2, L0747: 2, S0031: 2, L0581: 2. | L0766: 1, L0655: 1, L0657: 1, L0526: 1, L0783: 1, L0809: 1, L0544: 1, L0529: 1, L0664: 1, S0428: 1, H0593: 1, S0126: 1, H0682: 1, H0659: 1, H0670: 1, H0648: 1, L0611: 1, S0432: 1, L0756: 1, L0757: 1, S0436: 1 and S0194: 1. |

H0171: 1, T0002: 1, H0685: 1, T0049: 1, H0657: 1, S0116: 1, L0481: 1, H0638: 1, S0358: 1, S0444: 1, S0410: 1, H0580: 1, H0722: 1, S0045: 1, S0046: 1, S0132: 1, H0393: 1, T0060: 1, H0156: 1, H0230: 1, H0320: 1, H0014: 1, L0163: 1, S0051: 1, H0615: 1, S0036: 1, H0412: 1, H0202: 1, H0560: 1, S0438: 1, S0440: 1, S0144: 1, L0772: 1, L0521: 1, L0662: 1, L0767: 1, L0768: 1, L5574: 1, L0522: 1, L0659: 1, L0526: 1, L0782: 1, L0788: 1, H0689: 1, H0690: 1, H0658: 1, H0670: 1, H0672: 1, S0378: 1, S0404: 1, S0028: 1, L0779: 1, L0757: 1, L0758: 1, L0759: 1, S0434: 1, L0589: 1, S0192: 1, H0422: 1 and S0424: 1.

| HPDVE37 | 1037303 | 658 | 34- 885 | 2833 | His-8 to Gly-18,
Phe-25 to Ala-39,
Val-70 to Ser-75,
Gln-114 to Gly-121,
Thr-146 to Lys-155,
Gly-213 to Asn-219,
Glu-256 to Asp-267. | H0521: 68, H0090: 12,
L0666: 10, L0748: 10,
L0775: 9, H0522: 9,
H0638: 8, L0771: 8,
L0659: 8, H0591: 7,
L0747: 7, L0770: 5,
L0664: 5, L0754: 5,
H0580: 4, H0486: 4,
H0622: 4, H0644: 4,
H0551: 4, H0494: 4,
L0655: 4, S0374: 4,
L0755: 4, L0759: 4,
S0132: 3, H0013: 3,
H0421: 3, H0553: 3,
H0616: 3, H0641: 3,
S0142: 3, L0766: 3,
L0563: 3, L0665: 3,
H0547: 3, L0756: 3,
L0779: 3, L0752: 3,
S0358: 2, S0376: 2,
S0444: 2, S0360: 2,
S0278: 2, H0431: 2,
H0586: 2, H0575: 2,
H0318: 2, H0581: 2,
H0457: 2, S0003: 2,
H0688: 2, H0039: 2,
H0264: 2, H0529: 2,
L0763: 2, L0769: 2,
L0646: 2, L0803: 2,
L0774: 2, H0701: 2, |

S0380: 2, H0555: 2,
L0439: 2, L0740: 2,
L0777: 2, L0731: 2,
H0445: 2, L0599: 2,
L0608: 2, H0506: 2,
S0040: 1, H0650: 1,
S0116: 1, S0212: 1,
S0356: 1, S0354: 1,
S0468: 1, S0045: 1,
H0619: 1, S6022: 1,
H0370: 1, H0392: 1,
H0497: 1, H0642: 1,
T0114: 1, H0427: 1,
H0042: 1, H0251: 1,
H0596: 1, H0046: 1,
H0086: 1, H0057: 1,
H0083: 1, H0375: 1,
T0023: 1, H0031: 1,
L0055: 1, H0598: 1,
H0135: 1, H0038: 1,
I0040: 1, H0412: 1,
H0056: 1, T0042: 1,
S0370: 1, H0509: 1,
S0144: 1, S0002: 1,
S0426: 1, L0796: 1,
L0772: 1, L0764: 1,
L0765: 1, L0662: 1,
L0768: 1, L0389: 1,
L0804: 1, L0651: 1,
L0636: 1, L0647: 1,

HTLES74	1037438	659	95 - 859	2834	L0791: 1, H0702: 1, H0693: 1, H0593: 1, S0122: 1, H0689: 1, H0659: 1, H0658: 1, S0328: 1, H0539: 1, S0152: 1, H0479: 1, S3012: 1, S0027: 1, S0206: 1, L0744: 1, L0749: 1, L0757: 1, S0031: 1, H0707: 1, L0597: 1, L0605: 1, L0667: 1, S0242: 1, H0543: 1, H0423: 1, H0677: 1 and H0352: 1.	H0618: 3, L0740: 2, L0749: 2, L0596: 2, L0597: 2, S0354: 1, H0580: 1, H0042: 1, H0253: 1, S0010: 1, H0172: 1, H0615: 1, H0412: 1, S0386: 1, L0648: 1, L0662: 1, L0768: 1, L0803: 1, L0774: 1, L0657: 1, L0809: 1, L0779: 1, L0758: 1 and H0445: 1.
HCORG51	1037480	660	3 - 434	2835	Cys-1 to Glu-6, Asp-52 to Asp-65, Lys-82 to Pro-88, Phe-111 to Ala-123.	S0136: 33, L0747: 16, H0144: 14, L0731: 14, L0752: 13, S0422: 12, L0740: 12, L0754: 11,

L0750: 11, H0038: 10,
S0026: 10, H0556: 9,
S0360: 9, L0665: 9,
L0521: 9, H0616: 8,
L0520: 8, L0776: 8,
L0664: 8, L0757: 8,
H0009: 7, S0003: 7,
L0655: 7, S0406: 7,
L0748: 7, H0170: 6,
L0471: 6, H0620: 6,
S0440: 6, L0518: 6,
L0749: 6, L0608: 6,
H0341: 5, S0442: 5,
H0351: 5, H0370: 5,
H0013: 5, H0090: 5,
H0551: 5, L0598: 5,
L0375: 5, L0659: 5,
S0126: 5, H0682: 5,
H0648: 5, L0751: 5,
H0543: 5, H0423: 5,
L0005: 4, S0444: 4,
S0007: 4, H0163: 4,
H0494: 4, H0529: 4,
L0769: 4, L0521: 4,
L0775: 4, L0666: 4,
H0659: 4, H0670: 4,
S0027: 4, L0758: 4,
H0542: 4, H0657: 3,
S0212: 3, S0354: 3,
S0408: 3, H0580: 3,

S0476: 3, S0278: 3,
S0222: 3, H04486: 3,
H0687: 3, H0674: 3,
S0448: 3, L0646: 3,
L0662: 3, L0649: 3,
L0774: 3, L0657: 3,
S0374: 3, H0547: 3,
S0328: 3, S3014: 3,
H0444: 3, H0171: 2,
H0265: 2, T0002: 2,
S0040: 2, H0716: 2,
H0295: 2, T0049: 2,
S0218: 2, H0656: 2,
S0116: 2, H0638: 2,
S0418: 2, S0420: 2,
S0358: 2, S0045: 2,
H0369: 2, H0431: 2,
H0415: 2, H0592: 2,
H0586: 2, H0574: 2,
T0109: 2, H0250: 2,
S0280: 2, S0010: 2,
H0052: 2, H0050: 2,
H0012: 2, H0051: 2,
S0051: 2, H0266: 2,
H0288: 2, S0214: 2,
H0252: 2, H0428: 2,
H0039: 2, H0673: 2,
H0135: 2, H0063: 2,
H0412: 2, H0623: 2,
S0150: 2, H0207: 2,

H0641: 2, S0142: 2,
S0344: 2, L0770: 2,
L0771: 2, L0766: 2,
L0558: 2, L0519: 2,
H0520: 2, H0684: 2,
H0435: 2, H0710: 2,
H0696: 2, H0704: 2,
H0134: 2, H0436: 2,
S0028: 2, L0756: 2,
L0753: 2, H0445: 2,
S0434: 2, L0588: 2,
H0422: 2, S0470: 1,
H0686: 1, H0685: 1,
S0342: 1, H0294: 1,
S0114: 1, S0134: 1,
H0583: 1, H0484: 1,
H0663: 1, H0241: 1,
H0176: 1, S0356: 1,
T0008: 1, H0637: 1,
H0152: 1, S0046: 1,
H0619: 1, H0645: 1,
H0411: 1, H0438: 1,
H0600: 1, H0497: 1,
H0642: 1, H0331: 1,
T0039: 1, H0635: 1,
H0427: 1, H0156: 1,
H0097: 1, H0575: 1,
H0706: 1, H0390: 1,
H0581: 1, H0421: 1,
H0434: 1, H0196: 1,

H0309: 1, H0596: 1,
L0040: 1, H0597: 1,
H0327: 1, H0530: 1,
H0544: 1, H0545: 1,
H0046: 1, N0006: 1,
H0570: 1, H0569: 1,
H0172: 1, H0123: 1,
H0010: 1, H0373: 1,
H0083: 1, H0510: 1,
H0099: 1, H0267: 1,
H0290: 1, H0328: 1,
H0535: 1, H0622: 1,
L0483: 1, T0006: 1,
H0316: 1, H0591: 1,
H0040: 1, H0634: 1,
H0413: 1, H0100: 1,
T0041: 1, H0334: 1,
H0560: 1, H0625: 1,
S0438: 1, H0647: 1,
S0144: 1, H0538: 1,
UNKWN: 1, L0369: 1,
L0762: 1, L0637: 1,
L0761: 1, L0373: 1,
L0764: 1, L0773: 1,
L0648: 1, L0626: 1,
L0767: 1, L0794: 1,
L0386: 1, L0378: 1,
L0805: 1, L0629: 1,
L0383: 1, L0382: 1,
L0809: 1, L0530: 1,

| HPAMM72 | 1038344 | 661 | 2 - 520 | 2836 | Gly-1 to Thr-11. | L0789: 1, L0663: 1, S0428: 1, H0701: 1, L0565: 1, H0519: 1, H0593: 1, H0689: 1, H0658: 1, H0672: 1, S0330: 1, H0539: 1, S0378: 1, S0380: 1, H0709: 1, S0152: 1, S0332: 1, S0044: 1, S0188: 1, H0187: 1, L0356: 1, H0478: 1, H0627: 1, H0631: 1, L0611: 1, S0206: 1, S0032: 1, L0439: 1, L0786: 1, H0343: 1, L0592: 1, L0485: 1, H0668: 1, H0136: 1, S0194: 1, S0196: 1, S0460: 1, H0506: 1 and H0008: 1. L0747: 5, H0424: 4, H0617: 4, L0769: 3, L0526: 3, S3014: 3, L0748: 3, L0750: 3, H0661: 2, H0663: 2, H0392: 2, I10156: 2, I10123: 2, I10033: 2, H0213: 2, H0059: 2, L0763: 2, L0542: 2, H0519: 2, L0751: 2, | 16p13.3 | 141750, 141800, 141800, 141800, 141800, 141850, 141850, 141850, 141850, 141850, |

| HKZAT03 | 1038378 | 662 | 21 - 1559 | 2837 | Thr-1 to Gly-8, Phe-49 to Leu-67, Gln-142 to Gly-150, Pro-274 to Leu-282, | H0617: 14, H0521: 11, L0794: 4, H0542: 4, H0638: 3, S0360: 3, L0648: 3, L0659: 3, | 22q13.33 | L0779: 2, L0731: 2, L0757: 2, L0605: 2, L0615: 1, S0342: 1, H0580: 1, S0278: 1, H0550: 1, S0280: 1, L0021: 1, T0048: 1, H0052: 1, H0544: 1, H0545: 1, L0471: 1, H0012: 1, H0620: 1, H0014: 1, N0007: 1, S0051: 1, H0083: 1, H0284: 1, S0250: 1, H0688: 1, H0708: 1, H0080: 1, H0494: 1, H0509: 1, L0770: 1, L0764: 1, L0771: 1, L0376: 1, L0782: 1, L0809: 1, L0545: 1, L0666: 1, H0682: 1, H0659: 1, H0658: 1, H0672: 1, H0696: 1, S0044: 1, H0214: 1, L0743: 1, L0740: 1, L0754: 1, L0777: 1, S0260: 1, S0276: 1 and S0196: 1. | 156850, 186580, 191092, 600140, 600273, 601313, 601785 |

| HDQMA85 | 1038717 | 663 | 228 - 356 | 2838 | Pro-396 to Leu-402, Arg-405 to Glu-410, Gly-436 to Ala-442, Arg-470 to Pro-476, Pro-481 to Leu-486. | L0665: 3, S0328: 3, H0518: 3, H0423: 3, S0358: 2, H0622: 2, H0641: 2, L0763: 2, L0663: 2, L0664: 2, H0689: 2, H0522: 2, H0555: 2, H0422: 2, H0624: 1, H0585: 1, H0657: 1, H0671: 1, H0402: 1, S0376: 1, H0580: 1, S0278: 1, H0549: 1, H0602: 1, H0586: 1, H0069: 1, H0635: 1, H0581: 1, H0546: 1, H0510: 1, H0179: 1, H0271: 1, H0644: 1, H0606: 1, H0090: 1, H0634: 1, H0551: 1, H0488: 1, H0509: 1, L0640: 1, L0800: 1, L0662: 1, L0804: 1, L0607: 1, L0657: 1, L0809: 1, L0790: 1, L0666: 1, H0593: 1, H0684: 1, H0672: 1, H0710: 1, S0434: 1, S0436: 1 and S0196: 1. | 12p12.3-p12.1 | 103950, 112410, |

| HVCCQ82 | 1038718 | 664 | 3 - 578 | 2839 | Ala-14 to Asp-19, Lys-92 to Arg-110. | L0748: 34, L0777: 15, S0438: 11, S0192: 11, L0608: 7, H0331: 6, H0574: 6, L0771: 6, S0027: 6, L0756: 6, H0632: 5, L0731: 5, S0360: 4, H0427: 4, L0662: 4, L0744: 4, L0779: 4, L0757: 4, S0242: 4, S0354: 3, S0408: 3, H0494: 3, H0509: 3, L0770: 3, L0775: 3, L0809: 3, L0666: 3, H0519: 3, H0648: 3, S3014: 3, S0028: 3, L0750: 3, H0661: 2, S0442: 2, S0358: 2, S0376: 2, S0444: 2, H0013: 2, S0280: 2, H0309: 2, H0545: 2, H0510: 2, H0032: 2, H0551: 2, S0142: 2, S0422: 2, L0774: 2, L0806: 2 | 12p12.3-p12.1 | 103950, 112410, 150100, 168470, 190070, 190070, 200990, 602096 | 150100, 168470, 190070, 190070, 200990, 602096 |

L0776: 2, L0518: 2,
L0532: 2, S0374: 2,
H0547: 2, H0435: 2,
H0696: 2, S0206: 2,
S0032: 2, L0755: 2,
L0758: 2, H0568: 2,
S0194: 2, H0170: 1,
H0685: 1, S0116: 1,
H0638: 1, H0339: 1,
S0045: 1, S0278: 1,
S6022: 1, H0586: 1,
H0497: 1, H0486: 1,
L0021: 1, H0003: 1,
H0147: 1, H0421: 1,
H0546: 1, S0050: 1,
H0014: 1, H0015: 1,
S0051: 1, H0355: 1,
H0375: 1, H0031: 1,
H0628: 1, H0038: 1,
S0014: 1, S0466: 1,
S0440: 1, H0633: 1,
H0646: 1, S0344: 1,
S0210: 1, S0002: 1,
L0371: 1, L0638: 1,
L0772: 1, L0373: 1,
L0764: 1, L0522: 1,
L0803: 1, L0526: 1,
L0545: 1, L0787: 1,
L0790: 1, L0663: 1,
H0520: 1, H0593: 1,

HTGFP54	1038915	665	22 - 528	2840	S0126: 1, H0682: 1, H0660: 1, H0666: 1, S0152: 1, S0406: 1, S0392: 1, H0345: 1, L0742: 1, L0439: 1, L0740: 1, L0753: 1, H0444: 1, H0653: 1 and S0196: 1.
HBODF41	1039017	666	1 - 2418	2841	H0435: 2, S0218: 1 and H0415: 1. L0747: 26, L0740: 20, L0748: 18, L0752: 14, L0745: 13, L0599: 11, L0659: 8, H0509: 7, L0756: 7, L0777: 7, S0222: 6, S0010: 6, L0764: 6, L0776: 6, L0666: 6, L0754: 6, L0746: 6, H0013: 5, S0346: 5, H0050: 5, L0750: 5, L0758: 5, S0360: 4, H0574: 4, L0632: 4, S0280: 4, L0471: 4, H0039: 4, H0622: 4, L0766: 4, L0774: 4, L0783: 4, H0445: 4, L0366: 4, H0586: 3, H0251: 3, H0014: 3, T0010: 3, H0644: 3, L0769: 3.

L0796: 3, L0761: 3,
L0663: 3, L0744: 3,
L0751: 3, L0731: 3,
L0759: 3, L0596: 3,
S0418: 2, S0358: 2,
S0376: 2, H0580: 2,
H0393: 2, H0392: 2,
H0592: 2, H0427: 2,
H0052: 2, N0006: 2,
H0024: 2, H0266: 2,
H0428: 2, H0553: 2,
L0633: 2, S0142: 2,
L0598: 2, L0763: 2,
L0646: 2, L0662: 2,
L0803: 2, L0775: 2,
L0809: 2, H0144: 2,
L0438: 2, H0690: 2,
H0435: 2, H0670: 2,
H0651: 2, H0539: 2,
S0378: 2, S3014: 2,
L0749: 2, S0031: 2,
S0434: 2, L0605: 2,
L0591: 2, S0192: 2,
H0506: 2, H0624: 1,
T0002: 1, S0342: 1,
T0049: 1, H0650: 1,
S0212: 1, S0001: 1,
H0384: 1, H0662: 1,
S0356: 1, S0442: 1,
S0354: 1, S0444: 1,

S0408: 1, S0410: 1,
I0229: 1, H0208: 1,
S0045: 1, S0046: 1,
H0619: 1, H0645: 1,
H0411: 1, H0261: 1,
S6016: 1, H0431: 1,
H0438: 1, H0587: 1,
H0643: 1, H0331: 1,
H0599: 1, S0049: 1,
H0596: 1, H0545: 1,
H0123: 1, H0057: 1,
H0373: 1, S0051: 1,
H0083: 1, H0355: 1,
H0687: 1, H0048: 1,
H0212: 1, S0364: 1,
H0361: 1, H0090: 1,
H0038: 1, H0087: 1,
L0060: 1, H0551: 1,
H0264: 1, S0386: 1,
H0100: 1, L0370: 1,
T0042: 1, S0352: 1,
S0440: 1, H0646: 1,
S0210: 1, S0422: 1,
L0770: 1, L0800: 1,
L0771: 1, L0773: 1,
L0648: 1, L0768: 1,
L0522: 1, L0632: 1,
L0805: 1, L0607: 1,
L0512: 1, L0791: 1,
L0792: 1, S0053: 1,

HRODW53	1039068	667	45 - 494	2842	Arg-115 to Gln-127, Leu-137 to Val-150.	L0748: 14, L0766: 11, L0777: 5, L0794: 4, L0803: 4, L0776: 3, L0747: 3, L0749: 3, L0791: 2, L0438: 2, H0435: 2, L0779: 2, L0780: 2, S0192: 2, L0442: 1, S6024: 1, S0134: 1, H0583: 1, S0222: 1, H0421: 1, H0235: 1, H0620: 1, H0598: 1, H0059: 1, T0041: 1, S0426: 1, L0764: 1, L0662: 1, L0774: 1, L0805: 1, L0659: 1, L0809: 1, L0790: 1, L0792: 1, L0666: 1, L0664: 1, H0659: 1, H0670: 1, H0648: 1, L0740: 1.	S0374: 1, H0593: 1, H0659: 1, S0152: 1, H0696: 1, H0704: 1, H0436: 1, L0609: 1, S0390: 1, S0037: 1, S0027: 1, L0741: 1, L0755: 1, H0444: 1, L0485: 1, L0581: 1, H0667: 1, L0096: 1 and S0194: 1.

HPAMC60	1039290	668	1 - 1242	2843	Pro-7 to Pro-17, Leu-20 to Gly-26, Leu-48 to Val-54, Pro-65 to Asn-70, Glu-90 to Ala-95, Ala-102 to Gln-116, Glu-122 to Leu-137, Val-183 to Leu-192, Ala-235 to Ile-256, Gly-264 to Asp-270, Phe-282 to Ile-288, Arg-309 to Ala-314, Asn-330 to Asp-336, Ala-338 to Asp-344, Lys-358 to Lys-367.	L0750: 1, L0758: 1, S0106: 1 and S0446: 1.	H0682: 1	15q22	102578, 109700, 151670, 154550, 601780
HLMHM83	1039491	669	155 - 745	2844	Val-43 to Tyr-48, Pro-50 to Ser-57, Thr-75 to Gly-83, Tyr-95 to Asn-105, Tyr-155 to Trp-163.		H0617: 7, L0771: 6, S0408: 4, S0358: 3, H0638: 2, L0761: 2, L0764: 2, L0655: 2, L0634: 2, L0666: 2, H0435: 2, L0751: 2, L0777: 2, H0506: 2, H0650: 1, H0254: 1, H0255: 1, S0444: 1, H0351: 1, H0549: 1, H0600: 1, H0592: 1, L0022: 1, H0744: 1,		

| HOUDK70 | 1039538 | 670 | 84 - 1142 | 2845 | Phe-27 to Gly-32, Tyr-45 to Glu-57, Gly-80 to Asn-89, Ser-182 to Pro-187, Asp-270 to Ser-278, Tyr-288 to Trp-293. | H0204: 1, H0231: 1, S0440: 1, L0800: 1, L0643: 1, L0648: 1, L0662: 1, L0776: 1, L0664: 1, S0216: 1, H0690: 1, H0672: 1, S0378: 1, S0406: 1, H0555: 1, L0747: 1 and S0436: 1. | L0748: 13, L0731: 8, H0046: 7, L0740: 7, L0758: 7, L0766: 6, L0665: 5, L0747: 5, L0749: 5, H0135: 4, L0769: 4, L0776: 4, L0659: 4, L0438: 4, L0752: 4, L0757: 4, S0436: 4, H0265: 3, S0222: 3, S0474: 3, H0424: 3, H0040: 3, L0662: 3, L0783: 3, H0672: 3, H0521: 3, L0439: 3, L0750: 3, H0556: 2, H0717: 2, L0415: 2, S0360: 2, H0486: 2, H0575: 2, H0581: 2, H0251: 2, L0738: 2, L0483: 2, H0494: 2, S0440: 2, L0761: 2, L0794: 2, |

L0652: 2, L0654: 2,
L0666: 2, H0659: 2,
L0754: 2, L0485: 2,
L0608: 2, L0601: 2,
S0026: 2, H0423: 2,
H0686: 1, S0040: 1,
H0657: 1, S0212: 1,
H0662: 1, S0420: 1,
S0442: 1, S0358: 1,
S0444: 1, T0008: 1,
H0728: 1, S0045: 1,
S0476: 1, S6026: 1,
L0717: 1, H0550: 1,
H0392: 1, H0333: 1,
H0632: 1, T0040: 1,
H0250: 1, H0156: 1,
H0599: 1, H0706: 1,
H0421: 1, H0597: 1,
H0009: 1, L0471: 1,
H0620: 1, H0015: 1,
H0051: 1, S0051: 1,
H0083: 1, S0250: 1,
H0428: 1, T0006: 1,
H0553: 1, H0617: 1,
H0673: 1, H0169: 1,
H0674: 1, H0068: 1,
H0316: 1, H0412: 1,
H0413: 1, H0561: 1,
H0509: 1, H0641: 1,
H0633: 1, H0647: 1,

| HCYBI10 | 1039579 | 671 | 2 - 1042 | 2846 | Pro-29 to Ile-35,
Gly-49 to Thr-90,
Pro-113 to Val-123,
Glu-129 to Lys-146,
Glu-151 to Arg-163,
Leu-166 to Arg-179, | S0144: 1, S0422: 1,
L0640: 1, L0770: 1,
L0772: 1, L0373: 1,
L0646: 1, L0645: 1,
L0768: 1, L0803: 1,
L0774: 1, L0775: 1,
L0651: 1, L0655: 1,
L0661: 1, L0809: 1,
L5622: 1, L0663: 1,
H0144: 1, H0724: 1,
H0593: 1, H0690: 1,
H0684: 1, H0435: 1,
H0658: 1, H0670: 1,
H0648: 1, S0330: 1,
S0406: 1, H0447: 1,
S3012: 1, L0743: 1,
L0744: 1, L0751: 1,
L0777: 1, L0780: 1,
L0755: 1, L0759: 1,
H0665: 1 and H0543: 1. | L0771: 17, H0539: 6,
S0440: 3, L0805: 3,
L0776: 3, H0547: 3,
S0406: 3, L0779: 3,
H0012: 2, L0764: 2,
L0666: 2, L0663: 2,
H0689: 2, L0748: 2,
L0758: 2, H0686: 1,
S0442: 1, H0549: 1,
T0114: 1, H0052: 1, | 17q23-q24 | 106180,
115660,
138700,
139250,
148500,
150200,
154275,
162100,
170500,
170500, |

						170500, 176960, 182452, 230200, 249000, 253250
HMEFK29	1039652	672	643 - 999	2847		H0046: 1, H0687: 1, L0369: 1, L0770: 1, L0769: 1, L0772: 1, L0800: 1, L0806: 1, L0518: 1, L0809: 1, L0788: 1, H0144: 1, L0438: 1, H0660: 1, H0666: 1, H0648: 1, L0439: 1, L0747: 1, L0750: 1, L0756: 1, L0752: 1, L0759: 1, S0434: 1 and S0436: 1.
HAOSK79	1039663	673	48 - 659	2848	Asp-10 to Gly-17, Asp-38 to Ser-44, Asn-70 to Thr-79, Gly-81 to Ser-91, Lys-94 to Ala-102, Asp-110 to Ile-116, Asp-152 to Leu-157 Pro-172 to Glu-177.	H0402: 2, H0570: 1, H0266: 1 and H00566: 1. L0748: 28, L0758: 13, L0769: 7, L0766: 7, S0026: 7, L0749: 6, H0266: 5, H0616: 4, L0750: 4, L0362: 4, H0341: 3, H0658: 3, L0747: 3, H0686: 2, H0318: 2, H0413: 2, H0494: 2, L0646: 2, H0659: 2, L0751: 2, L0731: 2, L0759: 2, L0588: 2, T0002: 1, H0656: 1, H0484: 1, L0661: 1, L0481: 1, H0125: 1, S0045: 1, H0351: 1, H0013: 1,

					Mutations	Polymorphisms			Accessions
HPDRV42	1039689	674	3 - 1649	2849	Glu-31 to Pro-39, Thr-75 to Glu-80, Ala-131 to Gly-140, Ala-156 to Ala-165, Arg-184 to Phe-189, Asn-221 to Phe-228, Glu-239 to Glu-245, Ser-253 to Asp-261, Thr-267 to Thr-272, Thr-292 to Asp-297, Tyr-313 to Asn-325, Glu-385 to Leu-393	L002i: 1, L0471: 1, H0267: 1, H0252: 1, H0068: 1, H0038: 1, H0087: 1, H0412: 1, H0366: 1, L0772: 1, L0373: 1, L0775: 1, L0806: 1, L0776: 1, L0655: 1, L0657: 1, S0053: 1, H0144: 1, H0547: 1, H0660: 1, H0648: 1, S0152: 1, H0521: 1, S3014: 1, L0743: 1, L0740: 1, L0756: 1, L0777: 1, L0753: 1, L0757: 1, H0445: 1, L0608: 1, H0653: 1, H0136: 1, S0276: 1 and H0543: 1.	H0521: 23, S0360: 15, H0046: 14, S0126: 13, L0747: 12, H0551: 11, H0318: 10, S0328: 9, H0542: 9, H0580: 8, H0486: 8, H0581: 8, H0615: 8, S0440: 8, H0660: 8, S0434: 8, H0543: 8, L0664: 7, H0556: 6, S0212: 6, H0494: 6, L0663: 6, S0358: 5, S0476: 5,	15q15	177070, 177070, 182500, 218000, 227220, 243500, 600839, 601800

Tyr-400 to Lys-410, Pro-413 to Gly-420, Lys-454 to Leu-463, Pro-501 to Gly-514, Gln-535 to Leu-549.	H0013: 5, H0457: 5, H0553: 5, H0673: 5, H0696: 5, S0406: 5, L0740: 5, L0731: 5, L0596: 5, H0585: 4, H0661: 4, S0418: 4, S0356: 4, S0408: 4, H0575: 4, H0620: 4, H0617: 4, L0764: 4, L0666: 4, L0665: 4, H0519: 4, S3014: 4, S0027: 4, L0752: 4, H0265: 3, H0713: 3, H0657: 3, H0341: 3, H0671: 3, H0638: 3, S0420: 3, S0354: 3, H0619: 3, H0411: 3, H0370: 3, H0586: 3, H0587: 3, H0597: 3, L0471: 3, H0687: 3, S0250: 3, S0003: 3, S0142: 3, H0529: 3, L0662: 3, L0766: 3, L0651: 3, L0659: 3, H0690: 3, S0152: 3, H0436: 3, S0028: 3, L0748: 3, L0750: 3, L0779: 3, L0755: 3, L0757: 3, H0445: 3, S0011: 3, H0423: 3,

H0686: 2, T0049: 2, S0134: 2, S0116: 2, H0663: 2, H0662: 2, S0444: 2, S0045: 2, S0046: 2, S0132: 2, S0278: 2, H0549: 2, H0550: 2, H0497: 2, I10156: 2, I10599: 2, H0263: 2, H0544: 2, H0012: 2, H0014: 2, S0314: 2, H0428: 2, H0039: 2, H0135: 2, H0087: 2, H0623: 2, H0059: 2, H0100: 2, H0509: 2, S0150: 2, H0641: 2, S0144: 2, S0210: 2, S0002: 2, L0763: 2, L4497: 2, L0768: 2, L0774: 2, L0653: 2, L0654: 2, L0527: 2, L0657: 2, H0144: 2, S0374: 2, H0691: 2, H0520: 2, H0593: 2, H0689: 2, H0435: 2, H0658: 2, S0330: 2, S0378: 2, S0380: 2, L0754: 2, L0756: 2, L0758: 2, L0591: 2, L0485: 2, L0599: 2, S0026: 2,

H0667: 2, S0192: 2,
H0422: 2, H0506: 2,
L0600: 2, H0171: 1,
T0002: 1, H0717: 1,
H0716: 1, H0295: 1,
H0650: 1, S0180: 1,
H0484: 1, H0483: 1,
H0306: 1, S0442: 1,
S0376: 1, H0675: 1,
S0410: 1, H0489: 1,
H0637: 1, S0007: 1,
H0645: 1, H0393: 1,
L0717: 1, S0222: 1,
H0392: 1, H0415: 1,
H0601: 1, H0600: 1,
H0574: 1, T0039: 1,
H0244: 1, H0427: 1,
S0280: 1, H0098: 1,
H0042: 1, T0082: 1,
H0036: 1, S0346: 1,
H0705: 1, H0505: 1,
H0309: 1, H0545: 1,
L0041: 1, H0015: 1,
H0373: 1, S0051: 1,
H0071: 1, H0510: 1,
H0375: 1, S0318: 1,
S0022: 1, H0252: 1,
H0688: 1, H0644: 1,
H0628: 1, L0055: 1,
H0032: 1, H0169: 1,

H0124: 1, S0366: 1,
S0036: 1, H0090: 1,
H0634: 1, H0616: 1,
T0067: 1, H0264: 1,
H0488: 1, H0412: 1,
H0413: 1, T0042: 1,
L0475: 1, H0560: 1,
S0294: 1, S0450: 1,
H0633: 1, H0647: 1,
S0344: 1, H0538: 1,
S0422: 1, L0598: 1,
L0371: 1, L0770: 1,
L0638: 1, L0637: 1,
L3904: 1, L0772: 1,
L0646: 1, L0648: 1,
L0767: 1, L0364: 1,
L0649: 1, L0381: 1,
L0655: 1, L0661: 1,
L4669: 1, L0635: 1,
L0526: 1, L0783: 1,
L0647: 1, L0789: 1,
L4559: 1, S0428: 1,
H0697: 1, H0702: 1,
H0682: 1, H0683: 1,
H0670: 1, H0648: 1,
H0672: 1, H0539: 1,
H0710: 1, H0522: 1,
S0404: 1, H0555: 1,
S0392: 1, H0626: 1,

HOPID35	1039703	675	2590-1349	2850	Ser-1 to Pro-16, Asn-40 to Gly-46, Pro-48 to Arg-53, Lys-64 to Pro-72, Val-87 to Asp-93, Asp-109 to Tyr-118, Glu-157 to Pro-172, Pro-178 to Gly-188, Glu-252 to Leu-263, Thr-266 to Leu-273, Glu-296 to Ala-310, Glu-312 to Gln-318, Glu-324 to Asn-340, Glu-344 to Gly-373, Glu-383 to Asn-395, Val-399 to Glu-414.	H0627: 1, L0612: 1, S0206: 1, L0743: 1, L0439: 1, L0751: 1, L0753: 1, L0759: 1, S0260: 1, H0444: 1, L0608: 1, L0593: 1, H0668: 1, H0665: 1, S0242: 1, S0194: 1, S0196: 1, S0424: 1, H0008: 1, H0352: 1 and H0712: 1. L0662: 7, H0013: 5, L0766: 5, L0803: 4, L0655: 4, L0665: 4, L0740: 4, L0731: 4, H0677: 4, T0042: 3, L0776: 3, L0809: 3, H0519: 3, L0750: 3, L0759: 3, H0543: 3, H0170: 2, L0470: 2, H0341: 2, S0360: 2, H0266: 2, H0551: 2, L0351: 2, H0529: 2, L0646: 2, L0521: 2, L0651: 2, L0659: 2, L0663: 2, L0664: 2, H0547: 2, H0659: 2, L0602: 2, H0518: 2, H0522: 2, S0406: 2, L0748: 2, L0747: 2.

L0591: 2, H0542: 2,
H0506: 2, H0171: 1,
H0265: 1, T0002: 1,
H0713: 1, H0125: 1,
S0418: 1, S0358: 1,
T0008: 1, H0351: 1,
S0222: 1, H0431: 1,
H0415: 1, H0586: 1,
H0427: 1, S0280: 1,
L0021: 1, T0082: 1,
S0010: 1, H0581: 1,
H0566: 1, L0471: 1,
H0620: 1, H0024: 1,
H0014: 1, H0687: 1,
S0250: 1, H0328: 1,
H0428: 1, H0039: 1,
H0553: 1, H0090: 1,
H0591: 1, H0616: 1,
H0379: 1, H0056: 1,
T0041: 1, H0494: 1,
L0475: 1, S0014: 1,
H0560: 1, L0065: 1,
S0440: 1, H0509: 1,
H0641: 1, S0422: 1,
L0369: 1, L0502: 1,
L0763: 1, L0770: 1,
L0638: 1, L0761: 1,
L0373: 1, L0773: 1,
L0794: 1, L0381: 1,
L0774: 1, L0805: 1,

| HTFNP84 | 1039748 | 676 | 70 - 1227 | 2851 | Tyr-11 to Val-16, Gln-37 to Arg-42, Asn-50 to Arg-58, Leu-82 to Leu-96, Glu-112 to Gln-120. | L0527: 1, L0658: 1, L0529: 1, L0789: 1, L0791: 1, L4501: 1, L0666: 1, S0374: 1, L0565: 1, H0723: 1, S0126: 1, H0684: 1, H0435: 1, H0651: 1, S0330: 1, S0378: 1, S0152: 1, H0521: 1, S0044: 1, H0555: 1, H0631: 1, L0749: 1, L0756: 1, L0786: 1, L0755: 1, L0758: 1, S0031: 1, H0445: 1, L0588: 1, L0605: 1, L0608: 1, L0595: 1 and H0653: 1. | AR096: 1, AR089: 1, AR055: 1, AR053: 1, AR033: 1, AR061: 1, AR060: 0, AR104: 0, AR039: 0, AR052: 0 L0766: 16, S0440: 7, L0646: 7, H0547: 6, H0659: 5, L0749: 5, L0759: 5, H0650: 4, S0410: 4, S0422: 4, S0374: 4, H0341: 3, H0032: 3, H0040: 3, H0529: 3, L0804: 3, |

H0520: 3, H0435: 3,
H0658: 3, H0521: 3,
S0406: 3, L0748: 3,
H0423: 3, S0424: 3,
H0170: 2, H0657: 2,
S0418: 2, S0280: 2,
H0266: 2, H0598: 2,
H0090: 2, H0616: 2,
L0763: 2, L0803: 2,
L0666: 2, L0663: 2,
H0660: 2, H0672: 2,
L0756: 2, L0757: 2,
S0026: 2, H0556: 1,
H0686: 1, H0656: 1,
S0001: 1, H0662: 1,
S0420: 1, S0358: 1,
S0376: 1, S0444: 1,
H0728: 1, S0045: 1,
L0717: 1, H0574: 1,
H0486: 1, H0318: 1,
H0596: 1, T0110: 1,
L0471: 1, H0024: 1,
H0014: 1, H0083: 1,
H0510: 1, S0250: 1,
S0003: 1, H0428: 1,
H0591: 1, H0634: 1,
H0551: 1, H0560: 1,
H0625: 1, H0641: 1,
H0647: 1, L0520: 1,
L0769: 1, L0761: 1,

						L0764: 1, L0521: 1, L0662: 1, L0774: 1, L0375: 1, L0805: 1, L0776: 1, L0655: 1, L0606: 1, L0659: 1, L0635: 1, L0809: 1, L0367: 1, L0789: 1, L0665: 1, H0519: 1, L0684: 1, H0670: 1, H0666: 1, H0710: 1, H0704: 1, H0134: 1, H0555: 1, L0439: 1, L0750: 1, L0779: 1, L0777: 1, L0752: 1, L0755: 1, L0758: 1, S0436: 1, L0608: 1, L0362: 1, H0667: 1, S0196: 1, H0542: 1, H0543: 1, H0422: 1 and H0352: 1.		
HTHDT76	1039871	677	1 - 603	2852	Gln-16 to Ser-24.	S0420: 1, H0600: 1, H0587: 1, H0013: 1, H0428: 1, H0644: 1, H0063: 1, H0386: 1 and L0747: 1.		
HSYEC21	1039891	678	411 - 2372	2853		H0521: 9, L0439: 9, L0747: 8, L0655: 6, L0748: 6, S0212: 5, S6028: 4, L0483: 4, L0794: 4, L0766: 4,	12q21-q23	124200, 147440, 160781, 217300, 235800,

600175, 600808	
H0040: 3, H0634: 3, S0386: 3, L0800: 3, L0662: 3, L0665: 3, L0438: 3, S0028: 3, L0740: 3, H0318: 2, H0544: 2, S0051: 2, H0615: 2, H0163: 2, H0494: 2, L0645: 2, L0649: 2, L0803: 2, L0804: 2, L0659: 2, H0547: 2, H0689: 2, S0380: 2, H0522: 2, L0743: 2, L0744: 2, L0749: 2, L0596: 2, L0366: 2, S0242: 2, S0114: 1, H0583: 1, H0650: 1, H0656: 1, H0341: 1, S0001: 1, H0483: 1, H0402: 1, H0638: 1, S0356: 1, S0354: 1, S0358: 1, S0408: 1, H0580: 1, L0103: 1, S0045: 1, H0640: 1, H0586: 1, H0360: 1, H0643: 1, H0486: 1, H0013: 1, H0036: 1, H0263: 1, H0546: 1, H0012: 1, S0050: 1, S0388: 1, H0359: 1, H0510: 1,	

HKGCO25	1040384	679	3 - 719	2854	Glu-53 to Phe-58, Arg-70 to Phe-79, Ile-94 to Val-102, Thr-106 to Thr-118, Glu-139 to Asp-149, Asp-183 to Lys-215.	H0271: 1, H0687: 1, S0003: 1, S0214: 1, H0428: 1, T0006: 1, H0591: 1, H0551: 1, T0067: 1, H0412: 1, H0560: 1, H0641: 1, S0210: 1, S0426: 1, L0606: 1, L0657: 1, L0518: 1, L0545: 1, H0144: 1, H0519: 1, S0126: 1, S0378: 1, H0436: 1, S3014: 1, L0750: 1, L0756: 1, L0779: 1, L0780: 1, L0758: 1, L0759: 1, H0668: 1 and S0026: 1.
HNOJN70	1040385	680	273 - 425	2855		L0766: 12, L0759: 8, H0171: 6, L0754: 6, L0731: 6, H0624: 5, H0584: 5, H0031: 5, S0422: 5, L0663: 5, L0547: 5, L0756: 5, S0276: 5, H0686: 4, S0474: 4, L0662: 4,

L0777: 4, L0758: 4,
H0170: 3, L0717: 3,
H0457: 3, H0090: 3,
L0770: 3, L0794: 3,
L0650: 3, L0805: 3,
L0655: 3, L0659: 3,
L0666: 3, H0520: 3,
H0543: 3, S0412: 3,
H0657: 2, H0341: 2,
H0306: 2, H0402: 2,
S0358: 2, S0360: 2,
H0574: 2, T0060: 2,
H0318: 2, L0163: 2,
H0328: 2, L0483: 2,
H0591: 2, L0637: 2,
L0646: 2, L0771: 2,
L0521: 2, L0649: 2,
L0803: 2, L0657: 2,
L0656: 2, L0517: 2,
L0789: 2, H0539: 2,
H0521: 2, L0742: 2,
L0439: 2, L0751: 2,
L0747: 2, L0752: 2,
L0592: 2, L0599: 2,
L0594: 2, L0362: 2,
H0556: 1, H0167: 1,
H0685: 1, H0344: 1,
H0650: 1, S0116: 1,
S0418: 1, S0420: 1,
S0356: 1, S0376: 1,

H0580: 1, S0045: 1, S00046: 1, S6026: 1, H0351: 1, S0222: 1, H0438: 1, H0486: 1, H0427: 1, L0021: 1, H0097: 1, H0004: 1, H0581: 1, L0041: 1, H0050: 1, L0471: 1, H0023: 1, H0057: 1, H0015: 1, H0051: 1, H0266: 1, S0336: 1, H0687: 1, S0003: 1, S0214: 1, H0622: 1, H0674: 1, H0040: 1, H0616: 1, H0413: 1, T0069: 1, H0100: 1, H0494: 1, H0561: 1, L0065: 1, H0509: 1, H0646: 1, L0598: 1, L0763: 1, L0769: 1, L0638: 1, L0796: 1, L0761: 1, L0641: 1, L0643: 1, L0549: 1, L0498: 1, L0375: 1, L0776: 1, L0527: 1, L0526: 1, L0518: 1, L0783: 1, L0809: 1, L0664: 1, H0144: 1, S0374: 1, T0068: 1, L0438: 1, L0352: 1,

| HADFS31 | 1040388 | 681 | 440 - 832 | 2856 | Ser-23 to Ser-34, Lys-48 to Glu-53, Cys-78 to Asn-88, Ala-108 to Asp-113, Glu-124 to Pro-131. | H0519: 1, H0593: 1, H0682: 1, H0658: 1, S0328: 1, H0518: 1, H0694: 1, H0626: 1, S0028: 1, L0743: 1, L0740: 1, L0745: 1, L0750: 1, L0780: 1, H0445: 1, L0588: 1, L0593: 1, L0595: 1, S0026: 1, H0423: 1 and S0424: 1. | L0439: 13, L0438: 8, L0731: 7, L0756: 6, L0803: 4, L0754: 4, L0750: 4, S0358: 3, H0716: 2, H0427: 2, L0766: 2, L0659: 2, L0783: 2, H0435: 2, H0660: 2, L0755: 2, L0758: 2, S0436: 2, S0342: 1, H0650: 1, L0443: 1, S0442: 1, S0360: 1, H0587: 1, H0632: 1, L0021: 1, T0082: 1, H0051: 1, S6028: 1, H0090: 1, H0646: 1, L0640: 1, L0770: 1, L0794: 1, L0804: 1, L0805: 1, L0809: 1, L0647: 1, |

| HJBDC89 | 1040569 | 682 | 1418 - 726 | 2857 | Gly-11 to Pro-17, Ser-61 to Gly-68, Val-103 to Leu-108, His-157 to Pro-162, Glu-197 to Pro-203, Gly-207 to Thr-213. | L0789: 1, L0666: 1, L0663: 1, H0690: 1, H0659: 1, H0670: 1, S0328: 1, S0028: 1, L0747: 1 and L0752: 1. L0439: 5, L0749: 5, L0770: 4, L0764: 4, L0438: 4, S0126: 4, L0758: 4, S0358: 3, L0768: 3, L0774: 3, L0783: 3, H0660: 3, S0152: 3, L0752: 3, L0755: 3, L0731: 3, L0592: 3, S0026: 3, H0656: 2, S0360: 2, S0010: 2, H0050: 2, H0169: 2, T0042: 2, L0775: 2, L0518: 2, L0809: 2, L0664: 2, L0665: 2, H0672: 2, L0754: 2, H0543: 2, L0615: 1, H0686: 1, S0116: 1, S0420: 1, S0408: 1, T0112: 1, H0156: 1, H0575: 1, H0706: 1, H0546: 1, H0572: 1, H0123: 1, L0471: 1, H0024: 1, H0373: 1, S0388: 1, T0010: 1, H0510: 1, | 14q24.1-q24.3 | 104311, 109150, 182600, 245200, 601208 |

| HTAIX75 | 1040591 | 683 | 129 - 557 | 2858 | Lys-34 to His-39. | S0003: 1, H0424: 1, H0031: 1, H0553: 1, H0165: 1, H0673: 1, H0708: 1, S0036: 1, H0040: 1, T0067: 1, H0488: 1, H0412: 1, S0039: 1, H0494: 1, H0509: 1, H0132: 1, S0144: 1, H0538: 1, H0529: 1, L0520: 1, L0800: 1, L0773: 1, L0794: 1, L0803: 1, L0804: 1, L0659: 1, L0528: 1, S0374: 1, S0148: 1, H0682: 1, H0696: 1, S0044: 1, L0748: 1, L0751: 1, L0745: 1, L0757: 1, H0445: 1, S0276: 1 and S0196: 1. | AR055: 14, AR033: 8, AR052: 8, AR096: 7, AR053: 7, AR061: 7, AR089: 6, AR060: 6, AR104: 3, AR039: 2 L0662: 2, L0804: 2, L0748: 2, L0439: 2, L0779: 2, S0360: 2, L0635: 1, H0457: 1, H0179: 1, L0763: 1, |

HODBO029	1040620	684	3 - 413	2859	H0373: 2, H0328: 2, H0428: 2, L0769: 2, L0439: 2, T0002: 1, S0376: 1, H0489: 1, S0278: 1, H0550: 1, H0253: 1, H0052: 1, H0063: 1, H0131: 1, L0764: 1, L0766: 1, L0352: 1, S0126: 1, S0380: 1, L0740: 1, L0747: 1, L0752: 1, L0592: 1, L0595: 1 and H0542: 1. L0646: 1, L0645: 1, L0766: 1, L0659: 1 and H0658: 1.		
HOCOF27	1040631	685	76 - 687	2860	H0264: 1, L0766: 1, H0660: 1 and H0539: 1.	11p15	
HSPSE88	1040694	686	2 - 922	2861	L0749: 7, S0026: 6, H0616: 4, L0766: 4, L0803: 4, L0665: 4, L0748: 4, L0740: 4, H0624: 3, H0170: 3, H0657: 3, S0358: 3, S0003: 3, L0455: 3, L0498: 3, L0809: 3, L0666: 3, H0659: 3, H0423: 3, S0442: 2, H0083: 2, H0038: 2, L0500: 2, L0764: 2,		108985, 186921, 602092

L0499: 2, L0804: 2,
L0775: 2, L0806: 2,
L0509: 2, L0607: 2,
L0657: 2, L0493: 2,
L0513: 2, H0690: 2,
L0602: 2, L0777: 2,
L0752: 2, L0759: 2,
L0600: 2, H0171: 1,
H0713: 1, H0716: 1,
L0002: 1, H0650: 1,
H0341: 1, S0001: 1,
L0638: 1, S0444: 1,
S0408: 1, S0222: 1,
H0486: 1, H0156: 1,
L0021: 1, H0042: 1,
H0253: 1, H0263: 1,
H0544: 1, H0545: 1,
H0271: 1, S0336: 1,
S0022: 1, S0214: 1,
H0328: 1, H0615: 1,
H0428: 1, L0483: 1,
H0673: 1, H0124: 1,
S0036: 1, H0090: 1,
H0040: 1, H0063: 1,
H0551: 1, T0067: 1,
T0041: 1, H0647: 1,
L0520: 1, L0761: 1,
L0800: 1, L0374: 1,
L0662: 1, L0768: 1,
L0381: 1, L0533: 1,

	1040826	687	1 - 354	2862	Pro-19 to Asn-26, His-58 to Pro-63.	H0556: 1, H0650: 1, S0376: 1, S0474: 1, H0038: 1, H0529: 1, H0683: 1, S3014: 1, S0206: 1, L0740: 1 and L0591: 1.
HSKXM78						L0651: 1, L0805: 1, L0653: 1, L0776: 1, L0655: 1, L0512: 1, L0659: 1, L0547: 1, L0783: 1, L0383: 1, L0663: 1, S0374: 1, L0352: 1, H0547: 1, H0593: 1, H0682: 1, H0683: 1, H0684: 1, H0696: 1, S0146: 1, H0187: 1, H0478: 1, S3012: 1, L0786: 1, L0757: 1, S0434: 1, L0592: 1, L0485: 1, L0599: 1, L0608: 1, L0594: 1, S0276: 1, S0460: 1 and H0506: 1.
HNLMB92	1040913	688	352 - 753	2863	Ala-1 to Gly-21, Pro-28 to Gln-35.	S0358: 8, S0010: 5, S3014: 5, S0126: 4, H0333: 3, T0067: 3, H0547: 3, L0747: 3, S0045: 2, H0486: 2, H0599: 2, S0346: 2, L0471: 2, H0428: 2. X

| HE8ON57 | 1040925 | 689 | 577 - 149 | 2864 | Pro-18 to Asp-25. | H0619: 1, H0013: 1, L0794: 1 and L0788: 1. | H0616: 2, H0658: 2, S0028: 2, L0742: 2, H0170: 1, S0116: 1, H0449: 1, S0418: 1, S6026: 1, H0550: 1, S0222: 1, H0438: 1, T0040: 1, H0013: 1, H0156: 1, T0082: 1, H0196: 1, H0251: 1, H0530: 1, H0150: 1, H0023: 1, H0266: 1, H0687: 1, H0615: 1, T0006: 1, H0031: 1, H0068: 1, H0551: 1, H0100: 1, T0041: 1, S0150: 1, H0652: 1, S0144: 1, H0529: 1, L0543: 1, H0144: 1, S0374: 1, H0691: 1, H0520: 1, H0689: 1, H0684: 1, H0670: 1, H0660: 1, H0672: 1, H0539: 1, S3012: 1, S0027: 1, L0744: 1, L0754: 1, L0749: 1, L0750: 1, L0752: 1, L0755: 1, L0731: 1, L0757: 1 and S0194: 1. |

HOCOC14	1040932	690	494 - 1384	2865	Leu-32 to Lys-43, Phe-92 to Arg-98, Glu-118 to Thr-136, Pro-173 to Tyr-178, Pro-215 to Asn-222, Leu-230 to Asn-235	H0556: 8, L0758: 7, L0593: 7, H0542: 7, L0601: 6, L0747: 5, H0618: 4, H0620: 4, H0617: 4, H0494: 4, L0439: 4, L0751: 4, S0420: 3, S0046: 3, H0622: 3, H0087: 3, L0766: 3, H0690: 3, I0670: 3, S0328: 3, L0748: 3, L0754: 3, L0731: 3, H0543: 3, H0265: 2, H0650: 2, H0484: 2, H0255: 2, S0418: 2, H0549: 2, H0333: 2, H0024: 2, H0551: 2, S0150: 2, L0764: 2, L0662: 2, L0375: 2, L0663: 2, L0665: 2, H0660: 2, S0521: 2, S0146: 2, L0741: 2, L0779: 2, L0361: 2, L0603: 2, H0422: 2, H0170: 1, S0040: 1, H0295: 1, H0294: 1, H0657: 1, H0656: 1, H0341: 1, S0212: 1, H0661: 1, S0442: 1, S0354: 1, S0360: 1, L0717: 1,	19q13.1	164731, 172400, 172400, 180901, 180901, 221770, 248600, 609918, 602716

S0278: 1, H0437: 1,
H0550: 1, H0438: 1,
H0592: 1, H0497: 1,
H0486: 1, H0101: 1,
H0013: 1, H0575: 1,
H0253: 1, H0581: 1,
H0052: 1, H0251: 1,
H0309: 1, H0204: 1,
H0545: 1, H0041: 1,
H0009: 1, H0081: 1,
H0014: 1, H0083: 1,
H0354: 1, H0266: 1,
H0687: 1, H0292: 1,
H0284: 1, H0039: 1,
H0553: 1, H0606: 1,
H0166: 1, H0068: 1,
H0135: 1, H0040: 1,
H0268: 1, H0412: 1,
S0038: 1, H0100: 1,
T0041: 1, H0280: 1,
H0429: 1, H0561: 1,
S0440: 1, H0641: 1,
S0144: 1, S0210: 1,
S0002: 1, L0640: 1,
L0770: 1, L0769: 1,
L0637: 1, L0761: 1,
L0642: 1, L0771: 1,
L0648: 1, L0774: 1,
L0655: 1, L0629: 1,
L0658: 1, L0809: 1,

HOGDP49	1041049	691	1 - 489	2866	Pro-6 to Gly-12, Ala-30 to Arg-35, Arg-90 to Thr-102, Phe-112 to Asp-120, Asn-157 to Thr-163.	H0265: 2, H0556: 1, S0418: 1, S0376: 1, T0060: 1, S0280: 1, H0615: 1, H0628: 1, H0059: 1, H0100: 1, L0438: 1, S0126: 1, H0435: 1 and H0660: 1.	L0789: 1, L0790: 1, L0666: 1, L0664: 1, H0547: 1, H0593: 1, H0689: 1, H0684: 1, S0330: 1, H0539: 1, S0152: 1, H0522: 1, H0134: 1, S0406: 1, H0555: 1, H0627: 1, L0743: 1, L0750: 1, L0756: 1, L0752: 1, L0757: 1, S0434: 1, S0436: 1, S0276: 1, H0423: 1 and S0424: 1.
HOFMK22	1041070	692	3 - 359	2867	Asp-22 to Val-42, Phe-50 to Tyr-55, Leu-65 to Gln-70.	H0415: 2	
HBGNT69	1041900	693	808 - 383	2868	Glu-20 to Ser-27, Ala-49 to Pro-55, Phe-66 to Asp-71, Ala-77 to Val-83, Pro-85 to Tyr-103, Pro-135 to Ala-142.	H0052: 3, H0617: 3, H0135: 3, H0012: 2, H0253: 1, S0210: 1, L0659: 1 and L0779: 1.	
HSPSI42	1042462	694	3684 - 283	2869	Pro-5 to Ser-12,	L0666: 16, L0751: 15, Xp11.23, 300047,	

Arg-20 to Lys-35, L0596: 8, S0010: 7, Gly-45 to Gly-56, L0754: 7, L0731: 7, Pro-81 to Cys-99, L0758: 7, L0595: 7, Arg-195 to Ser-207, S0007: 6, L0741: 6, Ser-287 to Pro-292, L0591: 6, H0556: 5, Thr-301 to Gly-306, H0622: 5, L0662: 5, Asn-336 to Met-341, L0665: 5, L0743: 5, L0748: 5, L0745: 5, Ser-357 to Arg-364, L0747: 5, H0657: 4, Cys-416 to Asp-430, L0771: 4, L0663: 4, Gln-450 to Asp-455, L0664: 4, H0689: 4, Pro-509 to Thr-516, L0742: 4, L0439: 4, Arg-523 to Gly-529, L0592: 4, L0362: 4, Lys-541 to Lys-546, S0276: 4, H0661: 3, Tyr-636 to Gln-642, H0178: 3, H0424: 3, Ser-623 to Arg-634, H0176: 3, H0545: 3, Asp-661 to Leu-671, L0369: 3, L0766: 3, Glu-692 to Lys-703, L0659: 3, H0547: 3, Gln-734 to Tyr-742, S0406: 3, L0750: 3, Thr-792 to Ile-798, L0599: 3, L0361: 3, Pro-806 to Thr-811, L0601: 3, H0543: 3, Phe-875 to Gly-880, T0049: 2, H0484: 2, Ser-886 to Gln-891, S0420: 2, S0360: 2, Val-897 to Glu-903, L0717: 2, H0370: 2, Glu-926 to Asn-932, H0333: 2, H0635: 2, Arg-945 to Asp-950, H0318: 2, H0196: 2, Pro-952 to Lys-958, H0085: 2, H0546: 2, Gly-991 to Gly-1001, H0050: 2, T0010: 2, H0428: 2, H0213: 2, Pro-1019 to Trp- H0674: 2, H0591: 2,	300071, 300110, 300600, 301000, 301000, 301830, 309470, 309500, 309610, 309850, 311050, 312060

1028, Lys-1082 to Met-1091, Val-1098 to Gly-1104, Cys-1116 to Glu-1122.	H0100: 2, S0142: 2, L5575: 2, L0372: 2, L0764: 2, L0774: 2, L0775: 2, L0378: 2, L0776: 2, L0657: 2, L0636: 2, H0144: 2, L0565: 2, H0690: 2, H0660: 2, S3014: 2, S0028: 2, L0746: 2, L0749: 2, L0752: 2, L0753: 2, S0436: 2, L0588: 2, L0608: 2, S0026: 2, H0352: 2, H0395: 1, H0713: 1, L0785: 1, H0483: 1, S0418: 1, S0442: 1, H0733: 1, H0208: 1, S0045: 1, H0393: 1, H0351: 1, S0278: 1, H0549: 1, L0622: 1, T0039: 1, H0250: 1, H0618: 1, T0048: 1, H0581: 1, H0596: 1, L0040: 1, H0597: 1, H0544: 1, L0041: 1, H0086: 1, N0006: 1, H0620: 1, H0057: 1, H0051: 1, S0051: 1, H0083: 1, H0594: 1, H0188: 1, H0039: 1,

L0483: 1, T0006: 1,
H0604: 1, H0405: 1,
H0181: 1, H0617: 1,
H0169: 1, L0455: 1,
H0135: 1, H0038: 1,
H0087: 1, T0067: 1,
H0412: 1, H0413: 1,
H0059: 1, T0069: 1,
T0004: 1, L0351: 1,
H0041: 1, S0440: 1,
H0641: 1, S0422: 1,
H0529: 1, L0536: 1,
L0535: 1, L0638: 1,
L0637: 1, L0646: 1,
L0521: 1, L0794: 1,
L0650: 1, L0376: 1,
L0653: 1, L0655: 1,
L0606: 1, L0635: 1,
L0518: 1, L0382: 1,
L0809: 1, L0519: 1,
L0541: 1, L0790: 1,
L0793: 1, L0532: 1,
H0723: 1, H0520: 1,
H0593: 1, H0683: 1,
H0684: 1, H0659: 1,
H0648: 1, H0672: 1,
H0521: 1, H0696: 1,
H0694: 1, S0037: 1,
L0744: 1, L0740: 1,
L0780: 1, L0757: 1,

648

HPDQD23	1042649	695	174 - 344	2870	Leu-17 to Glu-22, Pro-44 to Gly-51.	L0759: 1, H0445: 1, L0587: 1, L0589: 1, L0593: 1, L0594: 1, S0106: 1, S0011: 1, H0136: 1, H0423: 1 and H0293: 1. H0657: 4, H0687: 2, H0658: 2, H0422: 2, H0222: 1, H0581: 1, S0050: 1, H0412: 1, H0641: 1, H0538: 1, L0648: 1, L0662: 1, L0766: 1, L0775: 1, L0805: 1, L0809: 1, L0438: 1, H0689: 1, S0328: 1, H0525: 1, L0439: 1 and L0755: 1.			
HWMBA10	1042859	696	39 - 476	2871	Pro-18 to Pro-24, Thr-45 to Gly-54, Ser-60 to Ser-67, Ala-82 to His-92, Pro-94 to Ser-106, Pro-126 to Arg-133.	S0410: 52, H0617: 5, L0774: 4, S0408: 3, H0360: 3, H0486: 3, L0809: 3, S0380: 3, L0751: 3, L0749: 3, L0361: 3, S0358: 2, S0376: 2, S0360: 2, L0764: 2, L0779: 2, L0752: 2, H0484: 1, H0483: 1, S0442: 1, H0734: 1, H0370: 1, H0257: 1, L0623: 1, H0599: 1, H0575: 1,		12q22	147440, 201470, 235800, 273300

HACNG39	1042871	697	2534 - 900	2872			
					Asp-16 to Ser-25, Arg-52 to Lys-74, Ile-102 to Asn-109, Asp-138 to Gly-149, Ser-161 to Thr-168, Asn-225 to Arg-235, Asn-247 to Lys-256, His-302 to Cys-311, Ile-324 to Ser-347, Cys-355 to Tyr-361, Cys-365 to Pro-375, Ile-389 to Gln-398, Ile-429 to His-502, Thr-505 to Asp-533, Lys-539 to Ser-545.	H0706: 1, H0744: 1, H0231: 1, L0163: 1, H0083: 1, H0510: 1, H0606: 1, H0038: 1, T0067: 1, S0438: 1, S0422: 1, L0770: 1, L0803: 1, L0806: 1, L0776: 1, L0792: 1, L0793: 1, H0660: 1, S0406: 1, H0631: 1, L0750: 1, L0777: 1, H0445: 1, S0436: 1, H0543: 1 and S0424: 1.	L0805: 5, L0766: 4, H0341: 3, S0440: 3, H0650: 2, H0656: 2, H0156: 2, S0003: 2, H0591: 2, H0264: 2, H0560: 2, L0598: 2, S0374: 2, L0438: 2, L0749: 2, L0752: 2, H0423: 2, H0685: 1, H0449: 1, H0458: 1, L0005: 1, S0444: 1, S0408: 1, H0580: 1, H0619: 1, H0486: 1, H0013: 1, H0581: 1, H0194: 1, T0103: 1, H0083: 1, H0551: 1, H0477: 1, H0488: 1.

| HETKL27 | 1042951 | 698 | 32 - 676 | 2873 | Arg-11 to Gly-36. | S0464: 1, L0773: 1, L0803: 1, L0776: 1, L0657: 1, L0789: 1, L0665: 1, H0547: 1, H0670: 1, S3012: 1, L0748: 1, L0779: 1, L0777: 1, L0758: 1, S0436: 1, S0194: 1 and H0422: 1. | AR089: 1, AR060: 1, AR055: 1, AR096: 1, AR053: 0, AR061: 0, AR033: 0, AR104: 0, AR039: 0 L0439: 19, H0046: 11, L0659: 8, L0752: 7, L0662: 6, H0435: 6, H0648: 6, L0803: 5, S0356: 4, S0440: 4, L0794: 4, L0663: 4, H0539: 4, S0152: 4, L0747: 4, L0779: 4, H0661: 3, S0360: 3, S0408: 3, H0598: 3, L0809: 3, L0665: 3, S0374: 3, L0438: 3, L0751: 3, L0731: 3, L0362: 3, H0171: 2, S0358: 2, S0376: 2, H0676: 2, H0393: 2, |

H0586: 2, H0052: 2,
T0067: 2, H0646: 2,
L0646: 2, L0764: 2,
L0364: 2, L0775: 2,
L0806: 2, L0657: 2,
L0788: 2, L0666: 2,
H0659: 2, H0666: 2,
S0330: 2, L0748: 2,
L0745: 2, L0750: 2,
L0777: 2, L0759: 2,
L0599: 2, L0608: 2,
L0411: 1, H0686: 1,
S0444: 1, H0441: 1,
H0333: 1, T0109: 1,
L0022: 1, H0575: 1,
S0010: 1, S0346: 1,
H0596: 1, L0738: 1,
S6028: 1, H0688: 1,
T0023: 1, T0006: 1,
H0644: 1, H0165: 1,
H0040: 1, H0494: 1,
S0466: 1, S0438: 1,
L0762: 1, L0640: 1,
L0772: 1, L0800: 1,
L0648: 1, L0389: 1,
L0805: 1, L0653: 1,
L0776: 1, L0382: 1,
L0789: 1, L0532: 1,
L0664: 1, H0547: 1,
H0689: 1, H0690: 1,

| HPCTH04 | 1043273 | 699 | 3 - 494 | 2874 | H0684:1, H0658:1, S0380:1, H0704:1, S0168:1, H0478:1, S0037:1, L0742:1, L0749:1, L0755:1, S0434:1, S0436:1 and H0506:1. | 9q31 | H0638:73, H0641:67, S0358:25, H0521:24, L0747:23, S0408:17, S0360:16, H0659:14, L0748:13, L0731:13, H0250:12, H0494:12, L0757:12, S0444:11, S0026:11, S0440:10, S0328:10, S0206:9, S0132:8, S0144:8, S0007:7, H0574:7, S0374:7, S0126:7, S0330:7, L0754:7, L0749:7, H0140:6, L0545:6, H0316:6, S0142:6, L0775:6, H0522:6, S0242:6, H0657:5, S0046:5, H0486:5, S0406:5, S0027:5, L0750:5, S0040:4, S0442:4, H0546:4, H0684:4, H0648:4, S3012:4. | 109400, 132800, 132800, 186855, 223900, 253800, 253800, 278700, 602088 |

S3014: 4, L0742: 4,
L0740: 4, L0756: 4,
L0752: 4, L0755: 4,
L0758: 4, H0686: 3,
H0341: 3, H0664: 3,
S0222: 3, H0592: 3,
H0331: 3, T0109: 3,
T0115: 3, H0046: 3,
H0014: 3, S0003: 3,
L0809: 3, H0547: 3,
H0660: 3, H0667: 3,
H0542: 3, H0171: 2,
T0049: 2, H0663: 2,
S0420: 2, S0356: 2,
S0580: 2, S0045: 2,
S0278: 2, H0537: 2,
H0333: 2, H0069: 2,
H0427: 2, H0098: 2,
H0597: 2, H0544: 2,
H0150: 2, L0471: 2,
H0060: 2, H0109: 2,
H0266: 2, H0644: 2,
H0032: 2, S0438: 2,
H0633: 2, L0762: 2,
L0769: 2, L0372: 2,
L0662: 2, L0806: 2,
L0789: 2, L0666: 2,
H0682: 2, H0670: 2,
L0602: 2, H0696: 2,
S0404: 2, L0588: 2,

L0581: 2, L0361: 2,
S0194: 2, L0615: 1,
H0141: 1, H0159: 1,
H0585: 1, S0342: 1,
H0294: 1, S0430: 1,
H0656: 1, H0661: 1,
H0125: 1, S0354: 1,
H0675: 1, H0637: 1,
H0208: 1, H0393: 1,
H0411: 1, H0586: 1,
H0497: 1, H0642: 1,
H0643: 1, H0632: 1,
S0280: 1, H0042: 1,
H0575: 1, H0318: 1,
H0263: 1, T0110: 1,
H0121: 1, H0530: 1,
H0350: 1, H0015: 1,
H0375: 1, H0061: 1,
S0022: 1, S0214: 1,
I0328: 1, L0483: 1,
H0031: 1, H0628: 1,
L0055: 1, H0165: 1,
H0674: 1, H0598: 1,
H0591: 1, H0038: 1,
H0040: 1, H0087: 1,
H0272: 1, H0413: 1,
L0475: 1, S0448: 1,
S0464: 1, S0306: 1,
S0466: 1, H0130: 1,

H0647: 1, H0646: 1, H0652: 1, S0344: 1, S0002: 1, L0598: 1, H0529: 1, L0520: 1, L0645: 1, L0773: 1, L0521: 1, L0626: 1, L0766: 1, L0649: 1, L0522: 1, L0653: 1, L0654: 1, L0379: 1, L0657: 1, L0559: 1, L0526: 1, L0782: 1, L0382: 1, L0519: 1, L0647: 1, S0052: 1, H0144: 1, H0435: 1, H0658: 1, H0672: 1, S0378: 1, S0152: 1, H0523: 1, H0187: 1, H0627: 1, H0631: 1, S0028: 1, S0032: 1, L0759: 1, S0260: 1, S0434: 1, L0608: 1, H0668: 1, H0665: 1, H0136: 1, S0192: 1, S0196: 1, S0424: 1, S0462: 1, H0506: 1, H0293: 1 and H0352: 1.	19q12-q13.1	164731, 172400, 172400, 180901,
	L0777: 16, L0779: 11, L0748: 10, S0358: 7, H0494: 7, L0759: 6, L0362: 6, H0529: 5,	
	2875	
	1216 - 305	
	700	
	1043351	
	HOCPK85	

| 180901, 221770, 248600, 600918, 602716 | L0766: 5, S0003: 4, L0770: 4, L0769: 4, S0330: 4, L0740: 4, L0747: 4, L0731: 4, L0758: 4, L0601: 4, H0664: 3, S0356: 3, S0360: 3, H0123: 3, L0471: 3, H0620: 3, H0100: 3, S0150: 3, L0764: 3, L0771: 3, L0662: 3, L0649: 3, L0803: 3, L0527: 3, S0374: 3, H0682: 3, H0660: 3, H0666: 3, L0648: 3, H0521: 3, L0755: 3, H0542: 3, H0556: 2, T0049: 2, S0418: 2, S0007: 2, S0045: 2, S0046: 2, H0443: 2, S0222: 2, H0586: 2, S0010: 2, H0581: 2, H0012: 2, H0373: 2, H0266: 2, H0031: 2, H0032: 2, H0551: 2, H0412: 2, H0538: 2, L0369: 2, L0637: 2, L0772: 2, L0773: 2, L0768: 2, L0375: 2, L0659: 2, S0126: 2, H0658: 2, | | | | |

L0439: 2, L0751: 2,
L0750: 2, L0752: 2,
L0596: 2, S0424: 2,
H0506: 2, H0585: 1,
H0294: 1, H0583: 1,
H0656: 1, S0116: 1,
H0483: 1, T0007: 1,
S0354: 1, S0132: 1,
H0369: 1, H0549: 1,
I0550: 1, H0370: 1,
H0409: 1, I0299: 1,
H0600: 1, H0497: 1,
H0574: 1, H0559: 1,
L0623: 1, H0486: 1,
H0244: 1, S0280: 1,
H0156: 1, H0599: 1,
H0575: 1, H0036: 1,
H0004: 1, H0618: 1,
S0346: 1, H0318: 1,
S0049: 1, H0052: 1,
H0085: 1, H0235: 1,
H0545: 1, S0388: 1,
H0021: 1, H0354: 1,
H0355: 1, S6028: 1,
H0615: 1, H0428: 1,
H0424: 1, S0366: 1,
S0036: 1, H0135: 1,
S0466: 1, L0065: 1,
H0633: 1, H0646: 1,
S0144: 1, S0344: 1,

| HVVBM94 | 1043532 | 701 | 1 - 852 | 2876 | Lys-1 to Cys-12, Gln-51 to Leu-56, Asp-63 to Asn-70, Lys-75 to Gln-80, Pro-116 to Thr-122, Gly-181 to Gly-190, Asp-210 to Gly-218, | H0656: 16, S0360: 12, H0445: 10, H0059: 9, L0659: 8, L0662: 7, L0748: 7, H0650: 6, H0341: 6, H0318: 6, L0731: 6, S0376: 5, S0440: 5, S0380: 5, S0422: 1, S0426: 1, L0763: 1, L0638: 1, L0796: 1, L0761: 1, L0667: 1, L0372: 1, L0800: 1, L0642: 1, L0804: 1, L0774: 1, L0775: 1, L0651: 1, L0633: 1, L0657: 1, L0558: 1, L0526: 1, L0384: 1, L0666: 1, L0664: 1, L0665: 1, H0520: 1, H0519: 1, H0593: 1, H0689: 1, H0659: 1, S0328: 1, S0380: 1, H0518: 1, S0152: 1, H0522: 1, H0134: 1, S3012: 1, S0390: 1, L0749: 1, L0780: 1, L0757: 1, S0031: 1, S0436: 1, L0595: 1, S0026: 1, H0653: 1, H0665: 1 and H0543: 1. | 11q21-q22 | 105580, 133780, 203100, 203100, 602574, 602574 |

Thr-252 to Ile-268,
Leu-274 to Lys-284,

H0657: 4, H0125: 4,
L0655: 4, L0666: 4,
S0358: 3, H0486: 3,
H0014: 3, H0648: 3,
L0602: 3, H0255: 2,
H0602: 2, H0039: 2,
H0622: 2, H0264: 2,
L0763: 2, L0766: 2,
L0774: 2, L0806: 2,
L0776: 2, L0665: 2,
H0672: 2, S0328: 2,
H0134: 2, H0555: 2,
L0743: 2, H0671: 1,
H0402: 1, H0638: 1,
S0007: 1, H0592: 1,
H0250: 1, H0635: 1,
H0599: 1, H0108: 1,
H0004: 1, H0597: 1,
H0231: 1, H0046: 1,
H0169: 1, H0316: 1,
T0042: 1, H0646: 1,
L0762: 1, L0800: 1,
L0767: 1, L0768: 1,
L0387: 1, L5574: 1,
L0527: 1, L0657: 1,
L0634: 1, L0809: 1,
L0792: 1, L0663: 1,
H0690: 1, H0682: 1,
H0435: 1, H0659: 1,
S0378: 1, H0694: 1,

HVVBC43	1043553	702	2754 - 2083	2877			4p16.3	
					Arg-3 to Thr-10,	L0747: 1, L0749: 1,		134934,
					Arg-26 to Gly-42,	L0779: 1, L0755: 1,		134934,
					Asn-46 to Ser-59,	S0308: 1 and H0506: 1.		134934,
					Glu-106 to Ala-122,	L0717: 10, L0748: 9,		134934,
					Ser-129 to Asp-139,	L0439: 8, H0623: 7,		143100,
					Thr-144 to Thr-156,	H0052: 6, H0013: 5,		180072,
					Leu-197 to Thr-206,	L0776: 5, L0438: 5,		180072,
					Pro-208 to Tyr-219.	L0740: 5, H0521: 4,		194190,
						L0756: 4, H0265: 3,		252800,
						H0556: 3, S0360: 3,		252800,
						L0010: 3, H0620: 3,		252800,
						L0662: 3, L0665: 3,		600965
						H0522: 3, S0116: 2,		
						S0418: 2, S0358: 2,		
						S0046: 2, H0635: 2,		
						H0575: 2, H0590: 2,		
						S0010: 2, L0109: 2,		
						L0471: 2, H0428: 2,		
						H0622: 2, H0031: 2,		
						H0038: 2, H0264: 2,		
						H0059: 2, S0015: 2,		
						H0641: 2, L0770: 2,		
						L0769: 2, L0773: 2,		
						L0774: 2, L0655: 2,		
						L0659: 2, L0789: 2,		
						S0126: 2, S0037: 2,		
						L0744: 2, L0747: 2,		
						L0779: 2, L0758: 2,		
						L0601: 2, H0170: 1,		
						L0686: 1, S0040: 1,		

H0294: 1, T0049: 1,
H0650: 1, H0657: 1,
S0212: 1, S0282: 1,
H0484: 1, H0663: 1,
H0305: 1, S0140: 1,
H0393: 1, H0351: 1,
H0437: 1, H0442: 1,
H0250: 1, H0427: 1,
H0156: 1, H0599: 1,
H0036: 1, S0346: 1,
H0318: 1, H0251: 1,
H0457: 1, H0009: 1,
H0123: 1, H0050: 1,
H0024: 1, H0051: 1,
H0083: 1, H0266: 1,
H0416: 1, H0286: 1,
H0328: 1, L0483: 1,
H0030: 1, H0376: 1,
H0598: 1, H0090: 1,
H0634: 1, H0616: 1,
H0551: 1, H0268: 1,
H0269: 1, H0100: 1,
H0494: 1, S0144: 1,
L0763: 1, L0772: 1,
L0646: 1, L0641: 1,
L0771: 1, L0767: 1,
L0766: 1, L0804: 1,
L0606: 1, L0809: 1,
L0666: 1, L0663: 1,
L0664: 1, H0144: 1,

						H0520: 1, H0519: 1, H0682: 1, H0659: 1, H0672: 1, S0328: 1, H0539: 1, S0152: 1, H0555: 1, H0626: 1, S3014: 1, S0028: 1, L0751: 1, L0786: 1, L0777: 1, L0731: 1, L0757: 1, L0759: 1, H0667: 1, H0542: 1, H0422: 1 and H0677: 1.
HTPDM31	1044199	703	1010 - 3	2878	Ser-49 to Leu-55, Pro-151 to Asp-157, Ala-168 to Arg-184, Pro-191 to Pro-215, Pro-232 to Pro-240, Pro-255 to Arg-268.	H0617: 6, L0666: 3, H0188: 2, H0181: 2, H0196: 1, H0039: 1, H0673: 1, L0373: 1, L0775: 1, L0659: 1, L0809: 1, L0789: 1, L0663: 1, L0665: 1, H0658: 1, S0330: 1, S0378: 1 and S0406: 1.
HSQEK12	1044577	704	35 - 439	2879	Ala-1 to Asp-16.	L0748: 5, L0439: 5, L0751: 3, L0777: 3, L0758: 2, L0596: 2, L0603: 2, S0001: 1, S0278: 1, H0581: 1, H0052: 1, H0123: 1, H0620: 1, S0388: 1, H0628: 1, H0040: 1, H0616: 1, H0646: 1, L0763: 1, L0770: 1.

| HPDRZ16 | 1044618 | 705 | 187 - 834 | 2880 | Pro-16 to Ala-22, Ala-26 to Val-31, Ser-66 to Val-73, Ala-80 to Pro-90, Glu-127 to Ala-135, Glu-142 to Glu-161, Leu-166 to Trp-173, Pro-176 to Gln-183, Arg-204 to Asp-211. | L0766:14, L0769:12, L0774:10, L0770:8, L0740:7, L0759:7, H0484:7, H0617:5, L0803:5, L0751:5, L0747:5, H0483:4, S0358:4, H0670:4, L0780:4, L0731:4, H0445:4, S0436:4, H0341:3, H0618:3, L0251:3, H0546:3, H0087:3, L0761:3, L0800:3, L0794:3, L0789:3, H0672:3, L0743:3, L0750:3, L0757:3, H0728:2, L0733:2, S0474:2, H0545:2, H0620:2, H0024:2, H0428:2, H0649:2, L0772:2, | L0769:1, L0800:1, L0794:1, L0803:1, L0378:1, L0776:1, L0655:1, L0789:1, H0670:1, S0328:1, H0696:1, S0406:1, H0436:1, L0746:1, L0779:1, S0031:1, L0595:1, S0011:1 and S0026:1. | Xq13.1 | 304040, 305100, 305450, 309605, 312760, 314250, 314580 |

L0768: 2, L0809: 2,
L0788: 2, H0699: 2,
H0539: 2, S0380: 2,
S0406: 2, L0748: 2,
L0756: 2, L0777: 2,
L0755: 2, H0444: 2,
H0650: 1, H0656: 1,
S0298: 1, S0212: 1,
H0661: 1, H0306: 1,
S0420: 1, S0442: 1,
S0354: 1, S0360: 1,
S0408: 1, H0730: 1,
S0045: 1, S0278: 1,
H0592: 1, H0257: 1,
H0427: 1, H0069: 1,
H0250: 1, S0280: 1,
H0156: 1, H0599: 1,
H0253: 1, H0581: 1,
H0309: 1, H0544: 1,
H0563: 1, H0569: 1,
H0012: 1, H0373: 1,
H0051: 1, H0510: 1,
H0416: 1, H0292: 1,
H0252: 1, H0615: 1,
H0006: 1, H0708: 1,
H0264: 1, S0438: 1,
S0440: 1, S0144: 1,
S0422: 1, L0763: 1,
L0638: 1, L0773: 1,
L0648: 1, L0649: 1,

HVCBC44	1044635	706	3 - 896	2881	Ala-1 to Gln-8, Lys-18 to Arg-23, Lys-56 to Val-64, Lys-129 to Ala-140, Pro-149 to Asn-155.	L5568: 1, L0804: 1, L0775: 1, L0375: 1, L0806: 1, L0653: 1, L0783: 1, L0384: 1, L0787: 1, L0665: 1, H0520: 1, S0126: 1, H0689: 1, H0684: 1, H0658: 1, H0660: 1, H0710: 1, H0696: 1, H0134: 1, H0631: 1, S0028: 1, S0032: 1, L0439: 1, L0754: 1, L0749: 1, L0779: 1, L0758: 1, S0031: 1, L0361: 1, H0542: 1, H0423: 1 and H0008: 1.
HPIAC22	1044711	707	701 - 1741	2882		H0666: 70, L0766: 3, L0665: 3, H0596: 2, L0794: 2, L0747: 2, H0624: 1, H0656: 1, L0717: 1, H0013: 1, H0318: 1, H0169: 1, L0643: 1, L0645: 1, L0764: 1, L0804: 1, L0657: 1, H0660: 1, L0757: 1, L0588: 1, L0592: 1, L0595: 1 and L0601: 1. L0745: 23, L0770: 2, S0150: 1, L0761: 1,

| HSODA53 | 1044741 | 708 | 855 - 995 | 2883 | | L0788: 1, H0520: 1, L0746: 1, L0747: 1, L0758: 1 and L0759: 1. AR055: 11, AR060: 6, AR033: 5, AR052: 4, AR061: 4, AR104: 4, AR096: 4, AR089: 4, AR039: 3, AR053: 3 H0328: 2, H0124: 2, L0766: 2, H0171: 1, L0005: 1, S0360: 1, H0329: 1, H0615: 1, H0477: 1, S0440: 1, L0598: 1, H0547: 1, S0126: 1, S0168: 1 and H0595: 1. |
| HE9ML74 | 1044760 | 709 | 3 - 959 | 2884 | Asp-8 to Asp-20, Phe-43 to Arg-52, Ser-102 to Asp-107, His-109 to Asp-124, Phe-131 to Lys-136, Pro-143 to Pro-149, Lys-189 to Leu-200, Asn-305 to Trp-310. | AR033: 5, AR060: 4, AR096: 4, AR089: 2, AR053: 1, AR061: 1, AR052: 1, AR055: 0, AR104: 0 L0803: 9, L0758: 7, L0439: 6, L0740: 5, L0766: 4, L0666: 4, L0663: 4, L0754: 4, L0747: 4, L0804: 3, H0144: 3, L0750: 3, L0756: 3, L0752: 3, L0600: 3, S0003: 2, L0455: 2, S0366: 2, |

H0529: 2, L0659: 2,
L0809: 2, L0665: 2,
H0547: 2, H0672: 2,
H0539: 2, L0748: 2,
L0759: 2, L0591: 2,
L0485: 2, S0040: 1,
H0650: 1, H0656: 1,
S0212: 1, H0663: 1,
S0360: 1, H0351: 1,
S0222: 1, S6014: 1,
H0392: 1, H0632: 1,
T0114: 1, H0427: 1,
L0021: 1, H0599: 1,
H0575: 1, H0581: 1,
S0049: 1, L0471: 1,
H0373: 1, H0510: 1,
S6028: 1, H0615: 1,
H0622: 1, S0036: 1,
T0067: 1, H0413: 1,
T0041: 1, S0002: 1,
S0426: 1, L0369: 1,
L0770: 1, L0769: 1,
L0761: 1, L0772: 1,
L0646: 1, L0794: 1,
L0774: 1, L0775: 1,
L0655: 1, L0661: 1,
L0647: 1, L0792: 1,
L0793: 1, L0664: 1,
H0682: 1, H0435: 1,
H0659: 1, H0660: 1,

| HPDRB76 | 1044762 | 710 | 145 - 855 | 2885 | Glu-14 to Gly-20, Gly-30 to Ala-37, Glu-121 to Leu-127, Lys-152 to Tyr-157, Glu-159 to Thr-173, Leu-177 to Lys-186, | H0651: 1, S0013: 1, H0696: 1, H0436: 1, L0779: 1, L0608: 1, S0446: 1 and H0506: 1. | L0747: 8, S0358: 6, L0766: 5, L0774: 5, L0750: 5, L0666: 4, S0406: 4, L0731: 4, H0341: 3, H0696: 3, L0748: 3, L0758: 3, H0650: 2, S0356: 2, S0410: 2, L0717: 2, H0014: 2, L0667: 2, L0768: 2, L0775: 2, L0659: 2, L0783: 2, H0659: 2, H0648: 2, S0330: 2, H0539: 2, L0742: 2, L0439: 2, L0745: 2, L0757: 2, L0759: 2, L0592: 2, L0599: 2, L0595: 2, H0657: 1, S0212: 1, H0662: 1, H0125: 1, S0420: 1, S0354: 1, S0444: 1, S0132: 1, S0476: 1, H0370: 1, L0181: 1, H0069: 1, H0427: 1, L0021: 1, H0575: 1, H0318: 1, S0214: 1, H0039: 1, | 1p34 | 130500, 133200, 138140, 168360, 171760, 171760, 176100, 176100, 178300, 230000, 255800 |

| HSYDI55 | 1044769 | 711 | 231 - 1070 | 2886 | Thr-52 to Glu-63,
Lys-108 to Asn-118,
Gly-148 to Ile-154,
Glu-178 to Thr-183,
Ala-185 to Arg-195,
Lys-202 to Lys-207,
Lys-209 to Arg-222,
Ser-226 to Glu-233. | AR052: 16, AR053: 9,
AR033: 5, AR089: 4,
AR096: 3, AR060: 3,
AR104: 2, AR055: 2,
AR039: 1, AR061: 1
H0651: 11, L0794: 8,
H0038: 5, L0805: 4,
L0758: 4, S0358: 3,
S0476: 3, L0766: 3,
L0803: 3, L0665: 3,
H0144: 3, H0521: 3,
L0748: 3, L0740: 3,
L0756: 3, H0222: 2, | H0622: 1, L0483: 1,
H0135: 1, H0616: 1,
H0477: 1, H0412: 1,
S0014: 1, H0561: 1,
L0065: 1, S0440: 1,
H0633: 1, L0763: 1,
L0761: 1, L0772: 1,
L0764: 1, L0381: 1,
L0653: 1, L0776: 1,
L0657: 1, L0383: 1,
L0647: 1, L0664: 1,
L0665: 1, H0144: 1,
H0723: 1, H0658: 1,
H0660: 1, H0627: 1,
S0027: 1, L0744: 1,
L0753: 1, L0755: 1,
L0599: 1 and L0594: 1. |

S0420: 2, S0360: 2, H0551: 2, H0412: 2, S0440: 2, L0804: 2, L0789: 2, L0666: 2, L0747: 2, S0436: 2, L0599: 2, H0542: 2, H0223: 1, H0159: 1, H0717: 1, H0716: 1, S0282: 1, H0580: 1, S0046: 1, H0411: 1, H0486: 1, H0013: 1, H0596: 1, L0738: 1, H0544: 1, H0046: 1, L0471: 1, H0014: 1, H0083: 1, S0003: 1, H0553: 1, L0055: 1, H0124: 1, H0591: 1, H0616: 1, H0059: 1, H0494: 1, S0294: 1, H0529: 1, L0770: 1, L0769: 1, L0800: 1, L0644: 1, L0764: 1, L0771: 1, L0662: 1, L0364: 1, L0653: 1, L0776: 1, L0655: 1, L0659: 1, L0526: 1, L0382: 1, S0148: 1, H0693: 1, S0328: 1, S0152: 1, H0436: 1, H0631: 1, S3014: 1,

HOGCI31	1044821	712	49 - 558	2887	S0027: 1, L0439: 1, L0749: 1, L0779: 1, L0777: 1, L0731: 1, L0757: 1, H0444: 1, H0445: 1, S0026: 1, S0242: 1, S0194: 1 and H0423: 1.
HNOKX86	1044893	713	69 - 575	2888	I0435: 1 and S0424: 1, L0740: 20, L0754: 14, L0742: 9, L0771: 7, L0748: 7, L0749: 7, L0752: 6, S0422: 5, L0770: 5, H0585: 4, S0360: 4, H0581: 4, L0769: 4, L0775: 4, S0374: 4, H0521: 4, L0747: 4, L0779: 4, L0753: 4, L0758: 4, H0295: 3, S0278: 3, S0440: 3, S0002: 3, L0649: 3, L0806: 3, S0126: 3, S0380: 3, S0434: 3, S0436: 3, S0026: 3, H0170: 2, H0661: 2, S0358: 2, S0045: 2, H0370: 2, H0442: 2, H0318: 2, S0474: 2, H0687: 2, S0003: 2, H0551: 2, S0438: 2, H0509: 2,

S0344: 2, L0764: 2,
L0662: 2, L0766: 2,
L0776: 2, L0659: 2,
H0659: 2, S3014: 2,
S0027: 2, L0751: 2,
L0756: 2, L0755: 2,
L0731: 2, L0588: 2,
L0599: 2, H0422: 2,
I10265: 1, H0556: 1,
S0040: 1, H0294: 1,
S0218: 1, H0656: 1,
S0116: 1, H0341: 1,
S0212: 1, S0418: 1,
S0356: 1, S0354: 1,
S0376: 1, H0580: 1,
H0728: 1, H0733: 1,
H0639: 1, H0441: 1,
H0431: 1, H0537: 1,
H0330: 1, H0013: 1,
H0052: 1, H0309: 1,
H0231: 1, H0530: 1,
H0544: 1, H0046: 1,
H0009: 1, H0123: 1,
S0388: 1, S0051: 1,
H0355: 1, H0266: 1,
H0615: 1, H0622: 1,
H0644: 1, H0674: 1,
H0124: 1, H0316: 1,
H0135: 1, H0038: 1,
H0372: 1, H0366: 1,

S0150: 1, H0646: 1, S0144: 1, S0142: 1, H0529: 1, L0762: 1, L0763: 1, L0371: 1, L0796: 1, L0637: 1, L0521: 1, L0768: 1, L0805: 1, L0655: 1, L0515: 1, L0526: 1, L0809: 1, L0528: 1, L0788: 1, L0792: 1, L0666: 1, L0663: 1, L0665: 1, H0144: 1, L0438: 1, H0690: 1, H0683: 1, H0684: 1, H0670: 1, S0330: 1, S0152: 1, H0704: 1, H0134: 1, S0406: 1, H0478: 1, H0727: 1, S0206: 1, L0591: 1, H0136: 1, H0216: 1, S0196: 1, H0542: 1, H0543: 1, H0423: 1, L0697: 1, S0424: 1 and S0384: 1.	AR039: 19, AR053: 13, AR096: 10, AR052: 9, AR055: 9, AR033: 9, AR089: 8, AR104: 7, AR060: 7, AR061: 6	Thr-19 to Ala-26.	2889	2112 - 577	714	1045117	HTPHG81

| HPCTV49 | 1045379 | 715 | 34 - 444 | 2890 | Ser-21 to Pro-28, Pro-36 to Ser-63, Gln-67 to Thr-83, Arg-88 to Thr-94, Pro-106 to Lys-111, Gly-125 to Gly-132. | S0358: 17, S0360: 7, L0604: 7, L0769: 5, L0497: 5, L0655: 5, L0590: 4, H0543: 4, L0622: 3, L0499: 3, L0775: 3, H0659: 3, H0670: 3, L0757: 3, L0588: 3, L0601: 3, S0276: 3, S0114: 2, H0657: 2, S0007: 2, H0586: 2, T0109: 2, T0048: 2, H0327: 2, L0471: 2, H0494: 2, L0770: 2, L0662: 2, L0527: 2, L0513: 2, L0530: 2, H0144: 2, H0689: 2, H0672: 2, H0521: 2, L0750: 2, L0755: 2, L0731: 2, L0596: 2, L0599: 2, L0608: 2, L0440: 1, T0049: 1, H0341: 1, H0483: 1, H0125: 1, H0580: 1, S0045: 1, H0351: 1, H0411: 1, S0222: 1, L0623: 1, | H0553: 2, S0282: 1, S0049: 1, H0052: 1, H0622: 1, H0040: 1 and S0406: 1. |

H0486: 1, T0039: 1,
L0586: 1, S0280: 1,
H0599: 1, T0082: 1,
H0274: 1, H0581: 1,
H0251: 1, H0009: 1,
H0266: 1, H0687: 1,
H0328: 1, H0615: 1,
H0428: 1, S0368: 1,
L0055: 1, H0316: 1,
I0598: 1, S0036: 1,
H0038: 1, T0067: 1,
H0560: 1, H0625: 1,
H0130: 1, H0633: 1,
H0647: 1, S0422: 1,
L0520: 1, L0762: 1,
L0500: 1, L0639: 1,
L0372: 1, L0646: 1,
L0645: 1, L0765: 1,
L0363: 1, L0767: 1,
L0768: 1, L0381: 1,
L0550: 1, L0498: 1,
L0774: 1, L0776: 1,
L0518: 1, L0782: 1,
L0543: 1, L0532: 1,
L0666: 1, H0683: 1,
H0648: 1, H0651: 1,
H0525: 1, H0522: 1,
S3012: 1, S0027: 1,
L0777: 1, L0752: 1,
L0759: 1, L0592: 1,

HHIGDK68	1045464	716	121 - 999	2891	Arg-128 to Asp-133, Lys-155 to Gln-164, Tyr-168 to Leu-174, Glu-190 to Leu-197, Pro-213 to Arg-224, Met-226 to Ser-241, Pro-247 to Ser-255.	L0361: 1, S0026: 1, H0667: 1 and H0542: 1.	22q13.1	103050, 103050, 124030, 124030, 138981, 182380, 188826, 190040, 190040, 190040
HNOKM38	1045500	717	5155 - 3530	2892	Gln-12 to His-23.	L0731: 21, L0747: 17, L0776: 16, L0748: 14, L0777: 14, L0752: 13, L0755: 13, L0769: 11, L0750: 11, L0766: 10, L0806: 8, L0770: 7, H0556: 5, L0599: 5, L0774: 4, L0756: 4, L0779: 4, L0753: 4, H0341: 3, L0761: 3, L0764: 3, L0771: 3, L0809: 3, H0144: 3, L0743: 3, L0754: 3, L0757: 3, H0265: 2, S0134: 2, H0306: 2, H0402: 2, H0580: 2, H0393: 2, H0369: 2, H0441: 2, H0013: 2,		

677

H0024: 2, H0051: 2,
H0687: 2, H0031: 2,
H0644: 2, H0135: 2,
L0763: 2, L0662: 2,
L0768: 2, L0794: 2,
L0803: 2, L0775: 2,
L0783: 2, H0521: 2,
L0759: 2, L0587: 2,
L0591: 2, L0603: 2,
S0114: 1, S0218: 1,
H0483: 1, H0254: 1,
H0663: 1, S0046: 1,
H0440: 1, H0411: 1,
H0550: 1, H0370: 1,
H0333: 1, H0574: 1,
T0039: 1, H0036: 1,
H0545: 1, H0150: 1,
H0083: 1, H0399: 1,
H0355: 1, H0179: 1,
H0271: 1, H0615: 1,
H0622: 1, T0006: 1,
H0553: 1, H0166: 1,
H0169: 1, H0674: 1,
L0456: 1, S0036: 1,
H0040: 1, H0634: 1,
H0100: 1, H0560: 1,
H0633: 1, H0695: 1,
L0762: 1, L0640: 1,
L0796: 1, L0641: 1,
L0648: 1, L0767: 1,

| HHFUN47 | 1045842 | 718 | 4701 - 2335 | 2893 | Glu-98 to Asp-109, Ser-121 to Ile-128. | L0805: 1, L0606: 1, L0657: 1, L0659: 1, L0528: 1, L0532: 1, L0664: 1, L0665: 1, S0330: 1, S0027: 1, L0740: 1, L0745: 1, L0749: 1, L0758: 1, H0445: 1, L0608: 1, L0595: 1, L0601: 1, S0242: 1, S0276: 1, H0542: 1, H0543: 1, H0423: 1, H0506: 1 and L0600: 1. | L0748: 13, L0754: 5, L0746: 5, S0356: 4, H0052: 4, L0803: 4, L0745: 4, L0749: 4, L0731: 4, S0360: 3, H0032: 3, H0646: 3, L0766: 3, L0438: 3, L0439: 3, L0740: 3, L0777: 3, S0222: 2, H0581: 2, H0014: 2, S0003: 2, H0591: 2, L0775: 2, L0664: 2, H0435: 2, L0743: 2, L0485: 2, H0542: 2, H0543: 2, L0600: 2, S6024: 1, S0376: 1, H0331: 1, S0414: 1. |

| HNTSV18 | 1045995 | 719 | 1 - 504 | 2894 | Ala-3 to Gly-19, Arg-29 to Gly-34, Gly-41 to Pro-51, Tyr-90 to Gly-102, Pro-119 to Trp-124. | H0492: 1, H0486: 1, T0082: 1, H0004: 1, S0010: 1, H0242: 1, L0471: 1, H0510: 1, H0039: 1, H0622: 1, H0553: 1, H0090: 1, H0038: 1, H0040: 1, H0616: 1, H0059: 1, H0654: 1, H0538: 1, S0426: 1, L0637: 1, L0761: 1, L0667: 1, L0794: 1, L0560: 1, L0804: 1, L0776: 1, L0666: 1, H0144: 1, S0374: 1, H0519: 1, H0593: 1, S0122: 1, H0684: 1, H0666: 1, S0330: 1, H0539: 1, S0152: 1, H0521: 1, L0522: 1, L0747: 1, L0779: 1, L0758: 1, L0590: 1, L0591: 1, S0192: 1, S0194: 1 and H0422: 1. | AR104: 6, AR033: 5, AR053: 5, AR089: 4, AR096: 3, AR060: 3, AR061: 1, AR055: 0, AR039: 0 H0144: 2, S0126: 2, | 7q21-q22 | 116860, 126650, 126650, 129900, 133170, 154276, |

| HWHGU08 | 1046137 | 720 | 2564-1749 | 2895 | Ala-43 to Thr-51, Gly-104 to Arg-112. | S0412: 19, L0803: 10, S0003: 9, S0414: 6, L0770: 6, L0766: 6, L0663: 6, L0754: 6, S0406: 5, L0752: 5, S0222: 4, L0771: 4, H0144: 4, L0439: 4, L0731: 4, S0444: 3, L0717: 3, H0328: 3, L0662: 3, L0655: 3, S0330: 3, H0521: 3, L0748: 3, L0759: 3, H0556: 2, S0356: 2, S0354: 2, H0676: 2, S0408: 2, H0013: 2, H0575: 2, H0050: 2, H0266: 2, S0214: 2, H0428: 2, H0031: 2, H0674: 2, T0067: 2, L0764: 2, L0806: 2, L0805: 2, L0809: 2, L0666: 2, L0664: 2, L0665: 2, H0547: 2, H0435: 2, H0659: 2, | S0212: 1, S0046: 1, H0587: 1, H0024: 1, S0036: 1, H0652: 1, L0649: 1, H0547: 1, H0658: 1 and L0439: 1. | 10p11.2-p12 | 600964, 602026 | 173360, 173360, 602136, 602136, 602136, 602447 |

H0670: 2, H0660: 2,
H0539: 2, S0028: 2,
L0779: 2, L0777: 2,
L0780: 2, L0588: 2,
L0595: 2, H0423: 2,
H0685: 1, S0218: 1,
H0650: 1, H0656: 1,
H0341: 1, S0001: 1,
H0125: 1, S0418: 1,
S0420: 1, S0560: 1,
S0046: 1, S0278: 1,
H0437: 1, H0455: 1,
H0586: 1, H0587: 1,
H0574: 1, H0486: 1,
H0156: 1, S0010: 1,
H0196: 1, H0052: 1,
T0110: 1, H0597: 1,
H0046: 1, H0572: 1,
H0123: 1, L0471: 1,
H0015: 1, S0362: 1,
L0163: 1, S6028: 1,
H0687: 1, H0622: 1,
T0023: 1, L0483: 1,
H0032: 1, S0364: 1,
H0708: 1, H0591: 1,
H0040: 1, H0634: 1,
H0551: 1, H0412: 1,
L0475: 1, S0015: 1,
H0625: 1, S0440: 1,

| HE6CR19 | 1046177 | 721 | 870 - 508 | 2896 | Val-3 to Gly-14, Ser-65 to Asn-70. | 2p22-p21 | AR089: 30, AR060: 18, AR039: 17, AR033: 16, AR096: 16, AR104: 13, AR055: 12, AR052: 12, AR053: 8, AR061: 8 | S0422: 1, S0426: 1, H0529: 1, L0762: 1, L0769: 1, L0796: 1, L0761: 1, L0667: 1, L0772: 1, L0641: 1, L0642: 1, L0643: 1, L0773: 1, L0804: 1, L0775: 1, L0653: 1, L0659: 1, L0783: 1, L0790: 1, T0068: 1, H0519: 1, H0658: 1, H0696: 1, S0206: 1, L0747: 1, L0749: 1, L0755: 1, L0758: 1, H0445: 1, S0436: 1, L0592: 1, H0568: 1, S0026: 1, H0653: 1, H0667: 1, H0136: 1, H0542: 1, S0424: 1 and S0446: 1. | 120435, 120435, 126600, 135300, 136435, 152790, 152790, 157170, 182601, 278300, |
| | | | | | | | L0731: 13, L0748: 11, L0747: 10, L0740: 6, L0763: 5, L0750: 5, L0770: 4, L0766: 4, | | |

683

601071, 601771, 602134		

L0555: 4, L0776: 4,
S0358: 3, H0100: 3,
S0440: 3, L0375: 3,
L0664: 3, L0665: 3,
L0756: 3, L0752: 3,
T0049: 2, S0442: 2,
S0045: 2, L0471: 2,
T0006: 2, H0413: 2,
L0769: 2, L0774: 2,
L0775: 2, L0655: 2,
L0659: 2, L0382: 2,
L0666: 2, L0663: 2,
H0658: 2, S0328: 2,
S0406: 2, L0439: 2,
L0755: 2, L0588: 2,
L0591: 2, L0362: 2,
S0116: 1, H0483: 1,
S0360: 1, S0132: 1,
H0393: 1, S0278: 1,
H0586: 1, L0021: 1,
H0052: 1, H0251: 1,
H0544: 1, H0041: 1,
H0266: 1, S0214: 1,
T0023: 1, H0641: 1,
L0772: 1, L0773: 1,
L0662: 1, L0386: 1,
L0388: 1, L0652: 1,
L0653: 1, L0656: 1,
L0526: 1, L0518: 1,
L0809: 1, S0126: 1,

HE9E182	1046856	722	3 - 173	2897	Glu-12 to Phe-17, Ser-44 to Asn-57.	1q21-q23			
							H0659: 1, S0330: 1, S0380: 1, L0602: 1, H0710: 1, S0027: 1, L0753: 1, L0757: 1, L0759: 1, L0480: 1, H0665: 1, S0276: 1, H0422: 1 and S0384: 1.	L0747: 7, H0144: 6, L0748: 6, L0758: 5, L0666: 5, L0750: 5, L0755: 5, S0360: 4, L0646: 4, L0375: 4, L0776: 4, S0358: 3, H0013: 3, H0024: 3, H0087: 3, L0761: 3, L0764: 3, L0775: 3, L0513: 3, L0809: 3, L0532: 3, L0565: 3, L0751: 3, L0752: 3, L0731: 3, L0588: 3, H0170: 2, T0049: 2, S0116: 2, H0255: 2, S0420: 2, S0280: 2, L0471: 2, H0620: 2, H0083: 2, L0483: 2, H0617: 2, L0769: 2, L0637: 2, L0643: 2, L0662: 2, L0497: 2, L0774: 2, L0655: 2, L0657: 2, L0783: 2,	104770, 107300, 107670, 110700, 131210, 134638, 135940, 136132, 145001, 146740, 146740, 146740, 146790, 152445, 152445, 159001, 173610, 174000, 176310, 179755, 182860, 182860, 182860,

186780, 191030, 191315, 227400, 227400, 230800, 230800, 266200, 600897, 601105, 601412, 601652, 602491	
H0666: 2, L0749: 2, L0759: 2, L0592: 2, L0361: 2, S0114: 1, S0134: 1, S0218: 1, H0662: 1, H0241: 1, S0356: 1, L0717: 1, H0333: 1, L0623: 1, H0486: 1, H0270: 1, H0069: 1, H0318: 1, H0581: 1, H0597: 1, H0546: 1, H0009: 1, H0178: 1, H0123: 1, S0051: 1, H0594: 1, H0271: 1, H0188: 1, H0615: 1, H0553: 1, H0181: 1, H0032: 1, H0169: 1, H0163: 1, H0038: 1, H0063: 1, H0164: 1, H0059: 1, H0117: 1, H0100: 1, L0351: 1, H0509: 1, S0144: 1, S0142: 1, L0598: 1, L0369: 1, L0520: 1, L0762: 1, L0640: 1, L0763: 1, L0371: 1, L0641: 1, L0642: 1, L0374: 1, L0771: 1, L0648: 1, L0363: 1, L0768: 1, L0499: 1, L0378: 1,	

HRADC23	1046980	723	49 - 339	2898					
HODHS68	1047137	724	516 - 1220	2899	Thr-26 to Ala-44, Pro-55 to His-71, Ser-76 to Cys-83, Asn-92 to Lys-104, Pro-149 to Tyr-158, Ser-208 to Asp-214, Glu-228 to Tyr-234.	L0748: 40, L0740: 39, L0754: 23, H0556: 19, H0620: 13, L0755: 12, L0731: 12, L0741: 11, S0002: 10, L0766: 10, L0439: 10, H0265: 9, H0013: 9, H0521: 9, L0747: 9, L0758: 8, H0599: 7, L0794: 7, L0751: 7, L0779: 7, L0777: 7, L0752: 7,	S0250: 2 and H0555: 1. L0806: 1, L0653: 1, L0558: 1, L0639: 1, L0517: 1, L0526: 1, L0384: 1, L0529: 1, L0543: 1, L0647: 1, L0664: 1, L0665: 1, S0428: 1, H0520: 1, H0690: 1, H0684: 1, H0658: 1, H0670: 1, H0672: 1, S0328: 1, S0378: 1, S0380: 1, H0576: 1, L0742: 1, L0744: 1, L0756: 1, L0757: 1, H0445: 1, L0596: 1, L0605: 1, L0593: 1, L0362: 1, L0542: 1, H0543: 1, H0506: 1 and H0352: 1.	3q21	106165, 117700, 117700, 150210, 169600, 180380, 180380, 180380, 190000, 203500, 232050,

276902,
600882,
601199,
601199,
601199,
601471,
601682

S0358: 6, S0360: 6,
H0052: 6, H0271: 6,
S0003: 6, S0344: 6,
S0426: 6, L0774: 6,
S0126: 6, L0757: 6,
L0759: 6, S0007: 5,
S0010: 5, H0046: 5,
H0150: 5, H0615: 5,
H0622: 5, H0591: 5,
H0040: 5, H0623: 5,
S0142: 5, L0770: 5,
L0764: 5, L0743: 5,
L0601: 5, H0624: 4,
H0575: 4, H0545: 4,
H0012: 4, S0022: 4,
H0644: 4, H0628: 4,
H0090: 4, H0038: 4,
H0634: 4, T0041: 4,
L0769: 4, L0363: 4,
L0776: 4, L0518: 4,
H0144: 4, S0328: 4,
L0744: 4, L0750: 4,
L0592: 4, H0661: 3,
L0005: 3, H0580: 3,
S0278: 3, L0471: 3,
H0428: 3, H0039: 3,
T0023: 3, H0616: 3,
L0598: 3, L0771: 3,
L0662: 3, H0658: 3,
H0522: 3, L0605: 3,

L0595: 3, S0026: 3,
H0543: 3, H0657: 2,
S0116: 2, H0341: 2,
S0420: 2, S0354: 2,
S0045: 2, H0393: 2,
L0717: 2, S0222: 2,
H0370: 2, T0039: 2,
H0618: 2, H0024: 2,
T0010: 2, L0483: 2,
H0031: 2, L0142: 2,
H0032: 2, T0067: 2,
H0268: 2, H0494: 2,
H0529: 2, L0775: 2,
L0375: 2, L0382: 2,
L0438: 2, S0374: 2,
L0809: 2, H0547: 2,
H0519: 2, H0690: 2,
H0660: 2, S0330: 2,
S0152: 2, H0134: 2,
H0626: 2, S0206: 2,
L0786: 2, L0753: 2,
L0608: 2, L0593: 2,
L0603: 2, S0011: 2,
H0668: 2, H0653: 2,
S0192: 2, H0422: 2,
H0170: 1, T0002: 1,
H0716: 1, S6024: 1,
S0114: 1, T0049: 1,
S0134: 1, H0583: 1,
H0638: 1, S0442: 1,

H0489: 1, S0046: 1,
H0619: 1, I0437: 1,
H0550: 1, H0441: 1,
H0461: 1, H0455: 1,
H0438: 1, H0601: 1,
S0005: 1, H0333: 1,
H0574: 1, H0632: 1,
H0486: 1, H0270: 1,
H0244: 1, H0069: 1,
H0635: 1, S0280: 1,
L0021: 1, H0002: 1,
L0022: 1, H0042: 1,
H0036: 1, H0318: 1,
H0581: 1, H0421: 1,
S0049: 1, H0251: 1,
H0309: 1, T0115: 1,
H0597: 1, H0041: 1,
T0003: 1, H0051: 1,
S0051: 1, H0083: 1,
S6028: 1, H0266: 1,
H0267: 1, H0288: 1,
H0286: 1, S0214: 1,
H0252: 1, H0070: 1,
H0213: 1, H0553: 1,
L0055: 1, H0708: 1,
H0598: 1, H0063: 1,
H0056: 1, T0069: 1,
S0386: 1, H0100: 1,
L0564: 1, T0042: 1,
L05640: 1, H0561: 1,

S0440: 1, H0132: 1,
S0150: 1, H0641: 1,
H0652: 1, L0369: 1,
L0762: 1, L0763: 1,
L0638: 1, L0372: 1,
L0800: 1, L0648: 1,
L0767: 1, L0768: 1,
L0561: 1, L0381: 1,
L0803: 1, L0804: 1,
L0651: 1, L0806: 1,
L0527: 1, L0657: 1,
L0659: 1, L0526: 1,
L0544: 1, L0367: 1,
L0789: 1, L0791: 1,
L0666: 1, L0664: 1,
H0520: 1, H0659: 1,
H0670: 1, H0648: 1,
H0672: 1, S0380: 1,
H0518: 1, S0454: 1,
S0013: 1, H0696: 1,
S0044: 1, S0406: 1,
H0555: 1, H0187: 1,
S0392: 1, H0627: 1,
H0631: 1, S3012: 1,
S0390: 1, S3014: 1,
S0027: 1, S0028: 1,
L0745: 1, L0756: 1,
L0780: 1, S0031: 1,
S0260: 1, H0707: 1,
S0434: 1, L0596: 1,

| HOPKT59 | 1047169 | 725 | 275 - 814 | 2900 | Gln-1 to Gln-11, Ala-24 to Asp-33, Pro-81 to Arg-91, Lys-99 to Lys-115, Trp-126 to Arg-142, Asp-162 to Glu-180, | L0588: 1, L0599: 1, L0362: 1, L0361: 1, S0276: 1, H0542: 1, S0384: 1 and H0293: 1. | H0556: 15, H0090: 12, S0152: 11, H0543: 10, H0553: 9, S0026: 9, I0341: 8, S0358: 8, H0046: 8, S0440: 8, L0659: 8, L0665: 8, L0595: 8, H0657: 7, H0266: 7, H0591: 7, H0529: 7, L0666: 7, L0663: 7, H0144: 7, H0547: 7, H0521: 7, L0756: 7, L0731: 7, S0360: 6, S0476: 6, S0003: 6, H0615: 6, H0644: 6, H0040: 6, H0413: 6, L0662: 6, L0664: 6, L0754: 6, L0752: 6, L0599: 6, L0608: 6, H0624: 5, S0408: 5, T0109: 5, H0013: 5, H0551: 5, H0560: 5, L0803: 5, L0655: 5, H0519: 5, S0126: 5, H0684: 5, L0439: 5, L0759: 5, S0436: 5, H0542: 5, |

H0423: 5, H0265: 4,
S0420: 4, H0031: 4,
H0598: 4, H0038: 4,
H0633: 4, L0520: 4,
L0770: 4, L0646: 4,
L0771: 4, L0649: 4,
L0775: 4, H0659: 4,
L0779: 4, L0758: 4,
H0445: 4, H0422: 4,
S0424: 4, H0656: 3,
S0132: 3, H0586: 3,
H0486: 3, H0327: 3,
S0051: 3, H0083: 3,
H0687: 3, H0039: 3,
L0483: 3, H0169: 3,
L0369: 3, L0769: 3,
L0657: 3, L0809: 3,
L0438: 3, H0520: 3,
S0330: 3, H0522: 3,
H0665: 3, H0171: 2,
H0686: 2, S0040: 2,
H0716: 2, H0295: 2,
S0134: 2, H0583: 2,
H0663: 2, H0402: 2,
S0418: 2, L0005: 2,
S0442: 2, S0354: 2,
S0376: 2, S0046: 2,
H0619: 2, H0393: 2,
L0717: 2, H0497: 2,
H0574: 2, T0114: 2,

H0427: 2, H0590: 2,
H0346: 2, H0012: 2,
H0373: 2, H0051: 2,
H0428: 2, H0628: 2,
H0673: 2, H0124: 2,
H0634: 2, H0616: 2,
H0488: 2, H0412: 2,
H0056: 2, L0564: 2,
H0494: 2, H0561: 2,
H0509: 2, H0132: 2,
H0646: 2, L0640: 2,
L0763: 2, L0772: 2,
L0373: 2, L0521: 2,
L0766: 2, L0804: 2,
L0805: 2, L0653: 2,
L0790: 2, H0690: 2,
S0328: 2, H0539: 2,
H0518: 2, H0134: 2,
H0631: 2, L0748: 2,
L0740: 2, S0031: 2,
S0434: 2, L0588: 2,
L0485: 2, L0593: 2,
L0603: 2, H0713: 1,
H0717: 1, S0218: 1,
S0116: 1, S0212: 1,
H0671: 1, H0664: 1,
H0662: 1, I0450: 1,
H0125: 1, S0444: 1,
T0008: 1, H0580: 1,
S0045: 1, H0351: 1,

S0222: 1, H0409: 1,
H0592: 1, H0642: 1,
H0331: 1, H0632: 1,
H0250: 1, H0069: 1,
H0635: 1, S0280: 1,
H0156: 1, L0021: 1,
H0042: 1, H0575: 1,
S0474: 1, I0581: 1,
H0421: 1, H0052: 1,
H0251: 1, H0263: 1,
T0103: 1, H0545: 1,
H0457: 1, H0041: 1,
H0123: 1, H0050: 1,
L0471: 1, H0620: 1,
H0024: 1, H0057: 1,
S0388: 1, H0239: 1,
H0375: 1, H0594: 1,
S0318: 1, S0316: 1,
H0286: 1, S0022: 1,
S0214: 1, H0328: 1,
H0622: 1, T0023: 1,
H0119: 1, L0142: 1,
H0032: 1, H0674: 1,
S0364: 1, H0376: 1,
H0135: 1, H0087: 1,
T0067: 1, H0623: 1,
H0100: 1, T0044: 1,
T0042: 1, H0625: 1,
L0065: 1, S0438: 1,
H0131: 1, S0150: 1,

HMCFK45	1047212	726	121 - 786	2901	Pro-15 to Leu-21	S0142: 1, S0422: 1, L0598: 1, L0631: 1, L0638: 1, L0641: 1, L0764: 1, L0773: 1, L0648: 1, L0363: 1, L0767: 1, L0768: 1, L5574: 1, L0381: 1, L0552: 1, L0774: 1, L0375: 1, L0607: 1, L0634: 1, L0782: 1, S0428: 1, S0374: 1, H0593: 1, H0689: 1, H0435: 1, H0660: 1, H0666: 1, H0648: 1, H0672: 1, S0380: 1, H0709: 1, S0013: 1, H0696: 1, H0704: 1, S0174: 1, S0406: 1, H0436: 1, H0576: 1, H0478: 1, S0432: 1, S3012: 1, S0028: 1, L0777: 1, L0755: 1, L0480: 1, L0597: 1, L0589: 1, L0591: 1, L0592: 1, L0594: 1, L0362: 1, L0601: 1, H0668: 1, H0667: 1, H0136: 1, S0194: 1 and H0008: 1.	L0747: 10, L0758: 6,

| HPIAN63 | 1047381 | 727 | 2 - 595 | 2902 | Lys-1 to Leu-6, | L0752: 5, L0774: 4,
L0663: 4, L0748: 4,
L0751: 4, L0775: 3,
L0757: 3, L0759: 3,
S0360: 2, S0007: 2,
H0687: 2, L0769: 2,
L0761: 2, L0766: 2,
L0806: 2, L0750: 2,
L0777: 2, L0753: 2,
L0755: 2, I10254: 1,
S0420: 1, S0356: 1,
H0392: 1, H0587: 1,
L0021: 1, H0046: 1,
H0178: 1, H0620: 1,
S0050: 1, H0617: 1,
H0673: 1, H0616: 1,
S0144: 1, S0344: 1,
L0637: 1, L0646: 1,
L0374: 1, L0771: 1,
L0767: 1, L0661: 1,
L0629: 1, L0659: 1,
L0783: 1, L0367: 1,
L0368: 1, L0666: 1,
L0664: 1, L0665: 1,
H0670: 1, H0672: 1,
S0404: 1, H0436: 1,
L0740: 1, L0749: 1,
L0603: 1, H0422: 1,
S0424: 1 and H0677: 1. |
| | | | | | | L0777: 13, L0794: 8, |

Ser-36 to Ser-41, Arg-54 to His-63.	L0438: 7, L0748: 7, L0659: 6, L0759: 6, L0591: 6, H0617: 5, L0439: 5, L0779: 5, L0758: 5, L0596: 5, H0556: 4, H0618: 4, H0052: 4, L0770: 4, L0803: 4, L0789: 4, S0418: 3, H0013: 3, H0628: 3, H0494: 3, L0598: 3, L0769: 3, L0804: 3, L0509: 3, L0665: 3, H0659: 3, H0624: 2, H0265: 2, H0717: 2, S0442: 2, S0354: 2, S0358: 2, L0149: 2, S0046: 2, S0278: 2, H0559: 2, S0010: 2, S0049: 2, L0041: 2, H0050: 2, H0083: 2, H0328: 2, UNKWN: 2, H0529: 2, L0662: 2, L0776: 2, L0655: 2, H0670: 2, H0660: 2, S0406: 2, L0747: 2, L0749: 2, L0752: 2, L0731: 2, S0436: 2, L0594: 2, H0542: 2, H0170: 1, H0171: 1, H0657: 1,

L0785: 1, H0384: 1,
H0671: 1, H0663: 1,
L0534: 1, S0356c: 1,
S0444: 1, S0408: 1,
H0549: 1, S0222: 1,
H0643: 1, H0632: 1,
S0414: 1, H0257: 1,
H0486: 1, T0082: 1,
T0048: 1, H0318: 1,
S0474: 1, H0194: 1,
H0263: 1, H0327: 1,
H0544: 1, H0546: 1,
H0046: 1, H0057: 1,
L0163: 1, H0051: 1,
S0051: 1, T0010: 1,
H0266: 1, H0188: 1,
L0052: 1, H0288: 1,
S0003: 1, H0604: 1,
H0644: 1, H0068: 1,
H0316: 1, S0036: 1,
H0040: 1, H0164: 1,
H0413: 1, H0059: 1,
H0100: 1, L0564: 1,
H0625: 1, S0448: 1,
S0440: 1, S0150: 1,
L0637: 1, L0373: 1,
L0800: 1, L0374: 1,
L0765: 1, L0771: 1,
L0766: 1, L0649: 1,
L0378: 1, L0805: 1,

| HNSME49 | 1047403 | 728 | 1295 - 558 | 2903 | Glu-16 to Gly-28, Glu-73 to Glu-78, Asp-94 to Ser-103, Lys-124 to Asp-129, Gln-149 to Arg-155, Ala-190 to Ser-233, Val-240 to Pro-246. | L0493: 1, L0783: 1, L0383: 1, L5622: 1, L0368: 1, L0787: 1, L0666: 1, L0663: 1, H0144: 1, S0374: 1, L0565: 1, H0520: 1, H0547: 1, H0658: 1, H0666: 1, H0672: 1, H0651: 1, S0380: 1, L0741: 1, L0754: 1, L0750: 1, L0756: 1, S0031: 1, L0589: 1, L0590: 1, L0485: 1, L0608: 1, L0604: 1, L0593: 1, H0506: 1 and H0352: 1. | L07794: 6, H0685: 2, S0356: 2, H0090: 2, H0494: 2, L0766: 2, L0803: 2, L0654: 2, L0665: 2, H0435: 2, L0362: 2, H0556: 1, H0384: 1, H0484: 1, S0418: 1, H0497: 1, H0013: 1, S0010: 1, S0346: 1, S0049: 1, H0545: 1, H0375: 1, H0674: 1, L0455: 1, H0413: 1, L0639: 1, L0800: 1, L0376: 1, |

| HWEAC64 | 1047473 | 729 | 155 - 721 | 2904 | Glu-17 to Val-22,
Val-29 to Asn-38,
Gly-60 to Val-67,
Gln-84 to Glu-93,
Lys-106 to Leu-115,
Gln-118 to Gln-123,
Lys-152 to Val-159. | L0378: 1, L0805: 1,
L0657: 1, L0659: 1,
L0783: 1, L0809: 1,
L0789: 1, L0663: 1,
L0664: 1, S0374: 1,
H0520: 1, S0126: 1,
H0666: 1, H0539: 1,
S0152: 1, S0037: 1,
L0756: 1, L0779: 1,
L0777: 1, L0755: 1,
S0436: 1, L0592: 1 and
H0506: 1. | AR104: 1, AR033: 1,
AR089: 1, AR053: 0,
AR096: 0, AR061: 0,
AR039: 0, AR052: 0
AR060: 0, AR055: 0,
H0694: 29, H0703: 13,
H0683: 10, H0717: 7,
H0713: 6, H0542: 6,
H0687: 4, H0656: 3,
H0685: 2, H0716: 2,
H0688: 2, H0695: 2,
S0428: 2, H0689: 2,
H0684: 2, H0521: 2,
H0580: 1, H0601: 1,
H0592: 1, H0708: 1,
S0150: 1, H0699: 1,
H0519: 1, H0709: 1,
H0522: 1, H0555: 1, |

| HOCQJ51 | 1047483 | 730 | 3 - 1016 | 2905 | Gln-15 to Phe-20, Ser-49 to Tyr-54, Glu-111 to Glu-121, Arg-185 to Asp-190, Phe-206 to Asp-212, Glu-309 to Pro-314. | S0028: 1, H0707: 1 and H0543: 1. | L0794: 8, H0556: 4, H0046: 4, L0809: 3, L0748: 3, H0341: 2, S0356: 2, S0046: 2, H0100: 2, L0769: 2, L0659: 2, S0328: 2, L0742: 2, H0422: 2, H0265: 1, T0002: 1, S0418: 1, S0420: 1, S0354: 1, S0045: 1, L0717: 1, H0549: 1, S0222: 1, H0586: 1, H0156: 1, T0110: 1, H0150: 1, S0051: 1, H0594: 1, H0266: 1, S0250: 1, H0604: 1, S0364: 1, H0634: 1, H0412: 1, H0494: 1, H0561: 1, H0695: 1, H0529: 1, L0761: 1, L0667: 1, L0772: 1, L0643: 1, L0764: 1, L0771: 1, L0768: 1, L0766: 1, L0803: 1, L0629: 1, L0368: 1, L0788: 1, H0690: 1, H0682: 1, H0660: 1, S0152: 1, S0404: 1, |

HOPKE15	1047634	731	3 - 434	2906	Met-18 to Tyr-45, Arg-56 to Thr-65, Gln-89 to Glu-107, Pro-109 to Ala-132.	L0747: 1, L0755: 1, H0445: 1 and H0542: 1.	H0046: 9, L0766: 8, L0731: 4, S0360: 3, S0408: 3, H0529: 3, L0769: 3, L0608: 3, H0543: 3, H0656: 2, H0341: 2, S0046: 2, S0010: 2, H0318: 2, H0616: 2, S0150: 2, S0002: 2, L0803: 2, L0659: 2, S0374: 2, H0684: 2, S0328: 2, L0750: 2, L0752: 2, L0759: 2, H0170: 1, S0134: 1, H0657: 1, H0637: 1, H0580: 1, H0486: 1, T0040: 1, T0109: 1, L0021: 1, H0575: 1, H0581: 1, H0052: 1, H0266: 1, H0188: 1, S0214: 1, H0328: 1, H0615: 1, H0428: 1, H0039: 1, H0553: 1, H0598: 1, H0163: 1, H0591: 1, H0038: 1, H0040: 1, T0067: 1, H0413: 1, S0464: 1, S0440: 1, L0598: 1, L0772: 1,

| HMAEL.73 | 1047646 | 732 | 748 - 2463 | 2907 | Pro-41 to Glu-47, Thr-169 to Glu-174, Gly-252 to Glu-259, Pro-343 to Ser-348, Asn-379 to Ala-384, His-425 to Glu-432, Asn-505 to Asn-511, Arg-516 to Phe-522, | L0800: 1, L0764: 1, L0773: 1, L0648: 1, L0768: 1, L0774: 1, L0775: 1, L0382: 1, L0792: 1, L0666: 1, H0520: 1, S0126: 1, H0682: 1, H0648: 1, H0539: 1, S0378: 1, S0380: 1, S0152: 1, H0521: 1, H0696: 1, H0214: 1, S0406: 1, S0027: 1, L0751: 1, L0777: 1, L0755: 1, L0758: 1, S0031: 1, L0480: 1, L0596: 1, L0592: 1, H0653: 1, H0667: 1, S0192: 1, H0542: 1 and H0422: 1. | L0758: 6, L0731: 4, L0747: 3, S0342: 2, L0769: 2, L0768: 2, L0749: 2, L0615: 1, H0686: 1, H0125: 1, S0418: 1, S0354: 1, S0358: 1, S0360: 1, S0222: 1, H0613: 1, H0004: 1, H0510: 1, S6028: 1, H0615: 1, H0039: 1, H0494: 1, S0144: 1, L0762: 1, |

| HN0KE42 | 1047663 | 733 | 2 - 445 | 2908 | Arg-1 to Tyr-7, Arg-17 to Arg-23, Glu-40 to Phe-45, Thr-64 to Tyr-71, Arg-117 to Glu-127, Arg-141 to Ser-148. | L0388: 1, L0775: 1, L0789: 1, H0689: 1, H0435: 1, H0648: 1, S0152: 1, L0744: 1, L0745: 1, L0755: 1 and H0423: 1. | H0551: 4, H04494: 4, H0561: 3, H0529: 3, H0521: 3, H0486: 2, L0471: 2, H0373: 2, H0510: 2, H0687: 2, H0553: 2, H0708: 2, H0560: 2, H0509: 2, L0794: 2, L0774: 2, H0547: 2, H0519: 2, H0539: 2, L0439: 2, L0754: 2, L0777: 2, H0685: 1, S0282: 1, S0418: 1, H0637: 1, H0485: 1, H0156: 1, H0530: 1, T0010: 1, S6028: 1, T0023: 1, H0212: 1, T0042: 1, L0763: 1, L0637: 1, L0768: 1, L0805: 1, L0530: 1, L0787: 1, S0148: 1, H0435: 1, H0670: 1, H0660: 1, H0710: 1, H0518: 1, H0522: 1, H0704: 1. |

Clone	No.	SEQ ID	Range	SEQ ID	Substitutions	Polymorphisms	Location	GenBank
HOFAE31	1047670	734	2 - 220	2909		S0176: 1, L0748: 1, L0749: 1, L0731: 1 and L0758: 1.		
HCLCX62	1047716	735	129 - 437	2910	Glu-1 to Leu-8, Arg-38 to Cys-49. Ala-1 to Leu-7, Ser-18 to Lys-23.	H0414: 2 S0136: 25, L0665: 4, S0001: 1, H0662: 1, H0632: 1, H0594: 1, H0188: 1, H0598: 1, H0379: 1, S0294: 1, L0764: 1, L0521: 1, L0803: 1, L0805: 1, L0493: 1, L0514: 1, L0515: 1, L0659: 1, H0689: 1, H0683: 1, H0670: 1, H0672: 1, S0328: 1, H0539: 1, H0478: 1, L0777: 1, L0731: 1 and L0599: 1.		
HNOAC93	1047820	736	826 - 554	2911	Pro-12 to Pro-20, Leu-24 to Ser-31, Pro-34 to Pro-82, Arg-84 to Pro-91.	AR053: 18, AR089: 16, AR096: 15, AR033: 14, AR039: 12, AR060: 11, AR104: 11, AR055: 10, AR061: 6 H0251: 6, H0412: 2, H0295: 1, S0114: 1, H0657: 1, H0255: 1, H0663: 1, H0619: 1, S0222: 1, H0392: 1, H0333: 1, H0486: 1,	16p13.3	141750, 141800, 141800, 141800, 141800, 141800, 141850, 141850, 141850, 141850, 141850, 156850,

| HME/A45 | 1047848 | 737 | 1 - 399 | 2912 | Phe-4 to Arg-11, Ala-16 to Ser-22, Cys-31 to Cys-39. | AR060: 5, AR061: 3, AR104: 3, AR089: 3, AR096: 2, AR055: 2 S0206: 5, H0413: 3, S0028: 3, H0170: 2, S0212: 2, H0546: 2, H0266: 2, H0171: 1, S0040: 1, H0580: 1, H0208: 1, H0411: 1, H0437: 1, H0453: 1, H0427: 1, H0051: 1, S0051: 1, H0355: 1, S0003: 1, H0031: 1, H0412: 1, S0188: 1, S0390: 1, S3014: 1, S0027: 1 and S0031: 1. | H0635: 1, H0318: 1, H0050: 1, H0051: 1, S0388: 1, S0051: 1, H0239: 1, H0688: 1, H0644: 1, H0181: 1, H0617: 1, H0606: 1, S0438: 1, L0769: 1, L0761: 1, L0803: 1, H0547: 1, S0126: 1, H0658: 1, H0672: 1, H0651: 1, S0404: 1, S0406: 1, H0436: 1, L0748: 1, L0751: 1 and S0276: 1. | 186580, 191092, 600140, 600273, 601313, 601785 |

| HLDAS11 | 1047937 | 738 | 224 - 958 | 2913 | Asn-33 to Glu-41, Ala-58 to Ser-69, Ser-77 to Pro-84, Pro-97 to Pro-102, Ile-121 to Gln-128. | H0693: 636, H0637: 29, H0551: 16, L0748: 11, L0777: 7, H0069: 5, L0666: 4, L0157: 3, H0641: 3, L07766: 3, L0665: 3, L0758: 3, H0510: 2, H0615: 2, H0509: 2, L0663: 2, H0521: 2, L0751: 2, L0755: 2, H0542: 2, H0650: 1, H0657: 1, S0356: 1, S0376: 1, S0360: 1, H0431: 1, H0013: 1, H0618: 1, S0010: 1, H0581: 1, T0001: 1, H0052: 1, H0251: 1, H0596: 1, H0373: 1, H0083: 1, H0271: 1, S0250: 1, S0003: 1, S0214: 1, H0622: 1, H0553: 1, H0674: 1, H0038: 1, H0040: 1, H0272: 1, H0059: 1, T0041: 1, H0646: 1, L0598: 1, L0662: 1, L0768: 1, L0649: 1, L0774: 1, L0805: 1, L0776: 1, L0657: 1, L0517: 1, L0382: 1, L0791: 1, |

Gene	cDNA Clone ID	No.	Nt range	SEQ ID NO:NT	Amino acid regions / features	Library codes	Cytologic band	OMIM
HWMJB31	1048009	739	202 - 732	2914	Ile-1 to Thr-7, Glu-16 to Glu-33, Leu-37 to Ala-46, Leu-69 to Glu-80, Tyr-89 to Gln-111, Ser-121 to Cys-128, Pro-135 to Glu-156, Glu-162 to Thr-177.	H0144: 1, S0126: 1, H0690: 1, H0658: 1, H0648: 1, S0152: 1, S0146: 1, L0743: 1, L0439: 1, L0754: 1, L0749: 1, S0260: 1 and L0366: 1.		
HAZAA31	1048188	740	1480 - 185	2915	S0358: 1	L0593: 16, L0591: 12, H0543: 9, L0667: 8, L0751: 8, H0581: 7, H0457: 7, H0617: 7, L0659: 7, S0418: 6, S0046: 6, H0494: 6, S0206: 6, S0116: 5, H0341: 5, H0402: 5, S0222: 5, H0271: 5, L0766: 5, H0521: 5, S0027: 5, L0740: 5, L0749: 5, L0595: 5, S0360: 4, H0486: 4, S0280: 4, H0024: 4, H0551: 4, L0372: 4,	3p14.3	150250, 164500, 277730, 600971, 601226

L0666: 4, H0519: 4,
H0542: 4, H0656: 3,
S0420: 3, S0356: 3,
S0045: 3, H0052: 3,
H0545: 3, H0050: 3,
H0620: 3, S0051: 3,
H0553: 3, H0135: 3,
T0042: 3, L0475: 3,
S0344: 3, L0769: 3,
L0654: 3, L0663: 3,
H0520: 3, S3014: 3,
L0439: 3, L0777: 3,
S0192: 3, S0424: 3,
H0265: 2, H0556: 2,
S0040: 2, H0657: 2,
H0484: 2, S0376: 2,
H0580: 2, S0007: 2,
H0333: 2, H0575: 2,
T0048: 2, H0421: 2,
S0049: 2, H0046: 2,
L0041: 2, H0266: 2,
H0615: 2, L0483: 2,
H0087: 2, H0413: 2,
H0059: 2, H0561: 2,
H0509: 2, L0771: 2,
L0649: 2, L0775: 2,
L0375: 2, L0809: 2,
L0665: 2, H0144: 2,
L0565: 2, L0438: 2,
H0658: 2, H0555: 2,

S0037: 2, L0741: 2,
L0748: 2, L0754: 2,
L0745: 2, L0757: 2,
L0758: 2, H0445: 2,
L0596: 2, L0599: 2,
L0601: 2, T0002: 1,
H0686: 1, S0402: 1,
H0294: 1, T0049: 1,
S0212: 1, S0001: 1,
H0483: 1, H0669: 1,
H0661: 1, H0663: 1,
H0662: 1, H0306: 1,
S0442: 1, S0358: 1,
H0637: 1, S0140: 1,
H0619: 1, H0393: 1,
L0717: 1, S0278: 1,
H0611: 1, H0610: 1,
H0357: 1, H0613: 1,
H0592: 1, H0497: 1,
H0559: 1, H0256: 1,
H0013: 1, H0427: 1,
S0010: 1, S0346: 1,
S0182: 1, H0318: 1,
S0474: 1, H0172: 1,
H0123: 1, L0471: 1,
S0388: 1, T0010: 1,
H0179: 1, H0687: 1,
H0288: 1, H0284: 1,
H0252: 1, H0428: 1,
H0628: 1, H0181: 1,

	Gln-116 to Trp-124,	2916	56 - 1465	741	1048300	HOCMCS3
H0606: 1, L0055: 1, I0124: 1, H0090: 1, H0040: 1, T0067: 1, H0412: 1, H0100: 1, H0560: 1, H0130: 1, H0647: 1, H0646: 1, S0142: 1, S0210: 1, S0002: 1, H0529: 1, L0535: 1, L0770: 1, L0638: 1, L0796: 1, L0637: 1, L0643: 1, L0374: 1, L0764: 1, L0773: 1, L0662: 1, L0768: 1, L0774: 1, L0378: 1, L0658: 1, L0383: 1, L0382: 1, L0791: 1, L0664: 1, S0126: 1, H0689: 1, H0690: 1, H0682: 1, H0435: 1, H0670: 1, H0660: 1, H0666: 1, L0355: 1, S0378: 1, L0602: 1, H0134: 1, H0436: 1, L0750: 1, L0755: 1, S0031: 1, S0436: 1, L0608: 1, S0026: 1, H0653: 1, H0665: 1, H0667: 1, H0217: 1 and H0352: 1. H0253: 8, H0618: 6,						

HCFCS40	1048427	742	2 - 1330	2917	Leu-21 to Gly-27, Pro-73 to Leu-83.		3p21.3	116806, 120120, 120120, 120120,

Glu-154 to Glu-161, Glu-270 to Asn-278, Glu-360 to Trp-371, Asp-440 to Asp-445, Ser-450 to Leu-456.

L0758: 5, L0766: 4, H0620: 3, H0038: 3, L0794: 3, S0358: 2, H0687: 2, H0135: 2, L0508: 2, L0809: 2, L0787: 2, L0665: 2, H0520: 2, L0439: 2, H0650: 1, H0657: 1, S0222: 1, H0574: 1, H0318: 1, H0581: 1, S0049: 1, H0545: 1, H0566: 1, H0622: 1, H0033: 1, H0181: 1, H0617: 1, H0165: 1, H0264: 1, H0059: 1, L0564: 1, H0561: 1, S0150: 1, H0647: 1, L0769: 1, L0644: 1, L0768: 1, L0774: 1, L0375: 1, L0806: 1, L0509: 1, L0514: 1, L0510: 1, L0789: 1, L0438: 1, H0435: 1, H0660: 1, H0648: 1, H0096: 1, H0436: 1, H0627: 1 and L0731: 1.

AR067: 241, AR033: 229, AR055: 211, AR061: 142, AR089: 103, AR053: 85.

120436, 120436, 120436, 138320, 168468, 182280, 600163				
AR052: 62, AR104: 48, AR096: 33, AR039: 25 S0474: 21, H0683: 7, L0748: 7, H0251: 6, L0777: 5, S0422: 4, L0764: 4, L0766: 4, L0740: 4, L0754: 4, S0418: 3, H0046: 3, H0553: 3, H0521: 3, L0779: 3, L0752: 3, L0731: 3, L0757: 3, H0422: 3, H0713: 2, H0717: 2, H0733: 2, S0476: 2, H0441: 2, H0575: 2, H0428: 2, H0494: 2, L0659: 2, L0666: 2, H0547: 2, H0519: 2, L0439: 2, L0745: 2, L0749: 2, L0756: 2, L0758: 2, L0485: 2, S0026: 2, S0384: 2, H0716: 1, S0212: 1, H0661: 1, S0356: 1, S0444: 1, S0045: 1, S0046: 1, S0132: 1, H0645: 1, H0406: 1, S6022: 1, H0431: 1, H0587: 1, H0486: 1, T0040: 1,				

HVCAA65	1048595	743	1042 - 212	2918	Trp-1 to Gly-10, Gly-22 to Gly-29, Leu-82 to Val-88, Ala-116 to His-123,	S0440: 12, H0543: 11, H0341: 7, L0775: 6, L0591: 6, L0770: 5, L0766: 5, L0750: 5,	H0013: 1, H0069: 1, H0156: 1, H0098: 1, H0581: 1, H0150: 1, H0024: 1, H0083: 1, S0025: 1, H0355: 1, H0328: 1, H0031: 1, H0124: 1, T0067: 1, H0413: 1, H0623: 1, H0560: 1, L0769: 1, L0667: 1, L0372: 1, L0767: 1, L0803: 1, L0804: 1, L0774: 1, L0775: 1, L0375: 1, L0784: 1, L0655: 1, L0657: 1, L0783: 1, L0647: 1, L5622: 1, L5623: 1, L0664: 1, H0697: 1, S0374: 1, H0724: 1, H0520: 1, H0435: 1, H0710: 1, H0518: 1, S0152: 1, L0751: 1, L0759: 1, S0031: 1, H0445: 1, S0434: 1, S0436: 1, S0192: 1, S0424: 1 and L0600: 1,

Lys-144 to Phe-156, Phe-167 to Thr-181, Glu-202 to Asp-207, Glu-262 to Ser-277.	L0759: 5, L0588: 5, H0542: 5, S0360: 4, S0045: 4, H0486: 4, H0012: 4, S0372: 4, S0144: 4, L0755: 4, L0731: 4, L0758: 4, L0596: 4, S0114: 3, H0657: 3, S0132: 3, H0640: 3, H0545: 3, H0266: 3, H0413: 3, H0494: 3, L0598: 3, H0529: 3, L0521: 3, L0364: 3, L0657: 3, L0783: 3, L0809: 3, L0666: 3, L0665: 3, H0547: 3, H0519: 3, S0126: 3, H0659: 3, H0670: 3, L0777: 3, S0436: 3, L0595: 3, H0395: 2, H0265: 2, T0049: 2, H0484: 2, H0402: 2, H0125: 2, S0418: 2, S0408: 2, S0410: 2, H0580: 2, T0109: 2, H0575: 2, H0581: 2, H0546: 2, H0373: 2, H0510: 2, H0708: 2, H0412: 2, H0396: 2, L0763: 2, L0769: 2, L0774: 2,

L0805: 2, L0653: 2,
L0776: 2, L0655: 2,
L0513: 2, L0656: 2,
L0558: 2, L0517: 2,
H0666: 2, H0672: 2,
S0328: 2, S0044: 2,
S0406: 2, L0751: 2,
L0747: 2, L0757: 2,
L0597: 2, L0581: 2,
L0599: 2, L0604: 2,
S0026: 2, H0653: 2,
H0422: 2, H0506: 2,
H0556: 1, T0002: 1,
H0686: 1, H0295: 1,
H0583: 1, H0650: 1,
S0298: 1, H0483: 1,
H0305: 1, S0420: 1,
S0356: 1, H0675: 1,
S0046: 1, S6022: 1,
H0432: 1, H0392: 1,
H0586: 1, H0497: 1,
H0333: 1, H0331: 1,
H0250: 1, S0280: 1,
L0021: 1, H0599: 1,
H0042: 1, T0082: 1,
S0010: 1, T0048: 1,
H0052: 1, H0597: 1,
L0738: 1, H0178: 1,
H0123: 1, H0081: 1,
L0471: 1, H0620: 1,

HSPSI76	1048635	744	85 - 1578	2919	Phe-1 to Pro-12, Asp-182 to Pro-188,	H0071: 1, H0355: 1, H0687: 1, S0022: 1, H0039: 1, T0006: 1, H0031: 1, H0628: 1, H0135: 1, H0038: 1, H0087: 1, H0264: 1, T0042: 1, S0016: 1, H0560: 1, H0509: 1, H0633: 1, H0649: 1, S0142: 1, S0344: 1, S0208: 1, S0422: 1, L0520: 1, L0762: 1, L3904: 1, L0667: 1, L0771: 1, L0768: 1, L0381: 1, L0784: 1, L0652: 1, L0559: 1, L0636: 1, L0540: 1, L0518: 1, L0384: 1, S0374: 1, H0723: 1, H0690: 1, H0660: 1, H0648: 1, S0380: 1, S0152: 1, H0521: 1, H0522: 1, H0555: 1, S0392: 1, S0027: 1, S0028: 1, S0206: 1, L0743: 1, L0779: 1, L0780: 1, L0753: 1, H0707: 1 and H0712: 1. S0250: 4, H0551: 4, S0360: 3, H0013: 3,	5q31
						121050, 131400,

HVVCH35	1048658	745	1107 - 91	2920				Gene IDs
					Ser-45 to Pro-51.	L0769: 5, L0759: 4, H0402: 3, S0376: 3, H0424: 3, L0749: 3, S0222: 2, L0535: 2, L0774: 2, L0806: 2, L0384: 2, L0666: 2, H0265: 1, S0218: 1, H0484: 1, S0354: 1.	22q13.33	138040, 153455, 159000, 179095, 181460, 192974, 192974, 600807, 601596, 601692, 601692, 601692, 601692, 602089, 602121, 602460
					Arg-215 to Tyr-224, Gly-240 to Lys-247, Pro-279 to Gly-286, Leu-295 to Glu-308, Pro-326 to Tyr-331, Thr-343 to Arg-349, Tyr-354 to Ala-360, Lys-369 to Asp-375, Ser-426 to Asp-432.	H0295: 2, H0628: 2, L0776: 2, S3014: 2, L0439: 2, S0212: 1, S0418: 1, S0420: 1, H0734: 1, S0046: 1, S0476: 1, H0497: 1, T0040: 1, H0544: 1, H0545: 1, H0024: 1, S0003: 1, H0644: 1, H0038: 1, H0040: 1, H0413: 1, S0294: 1, H0633: 1, S0144: 1, L0372: 1, L0805: 1, L0654: 1, L5623: 1, L4501: 1, H0144: 1, L0438: 1, S0126: 1, H0683: 1, H0672: 1, H0539: 1, H0521: 1, H0631: 1, S0037: 1, S0434: 1, L0588: 1, L0599: 1, L0601: 1 and H0665: 1.		

| HOFN166 | 1048739 | 746 | 3 - 710 | 2921 | Thr-1 to Asp-9, Gly-18 to Ser-24, Asn-35 to Arg-42, Trp-49 to Asp-62, Ser-69 to Ala-74, Arg-155 to Trp-167, | S0444: 1, S0360: 1, S0007: 1, H0392: 1, H0559: 1, H0486: 1, T0039: 1, T0060: 1, L0021: 1, H0004: 1, H0581: 1, H0052: 1, H0194: 1, H0204: 1, H0024: 1, H0405: 1, H0617: 1, H0606: 1, H0090: 1, H0272: 1, H0494: 1, S0438: 1, S0422: 1, S0002: 1, L0770: 1, L0772: 1, L0372: 1, L0641: 1, L0645: 1, L0771: 1, L0768: 1, L0794: 1, L0381: 1, L0775: 1, L0789: 1, H0547: 1, H0659: 1, H0658: 1, H0672: 1, H0521: 1, S0406: 1, H0727: 1, L0744: 1, L0779: 1, L0758: 1, H0445: 1, H0423: 1 and H0422: 1. | L0740: 10, L0752: 9, L0748: 8, S0422: 6, S0440: 5, L0666: 5, L0754: 5, S0360: 4, H0327: 4, L0771: 4, L0438: 4, S0126: 4, |

Leu-173 to Tyr-180, Arg-190 to Ala-197.	S0406: 4, L0779: 4, L0596: 4, S0444: 3, T0109: 3, H0575: 3, S0003: 3, L0805: 3, L0776: 3, L0809: 3, L0664: 3, L0665: 3, S0328: 3, H0696: 3, L0439: 3, L0755: 3, L0731: 3, H0543: 3, H0657: 3, H0662: 2, S0420: 2, S0356: 2, S0358: 2, S0408: 2, S0007: 2, H0415: 2, S0010: 2, H0046: 2, H0014: 2, H0083: 2, H0032: 2, H0674: 2, H0708: 2, H0090: 2, H0038: 2, H0272: 2, H0429: 2, H0494: 2, S0372: 2, S0438: 2, H0509: 2, L0598: 2, L0766: 2, L0649: 2, L0774: 2, L0775: 2, L0543: 2, L5622: 2, L0663: 2, H0144: 2, S0378: 2, L0602: 2, H0522: 2, S0028: 2, L0758: 2, L0588: 2, L0599: 2, S0026: 2, S0424: 2, H0170: 1,

L0615: 1, H0717: 1,
S0114: 1, S0116: 1,
H0341: 1, S0212: 1,
H0663: 1, H0458: 1,
S0354: 1, S0376: 1,
H0580: 1, H0730: 1,
H0733: 1, S0045: 1,
S0046: 1, H0619: 1,
H0393: 1, L0717: 1,
H0351: 1, H0369: 1,
H0549: 1, H0431: 1,
H0409: 1, H0586: 1,
H0587: 1, H0574: 1,
H0632: 1, H0486: 1,
T0039: 1, L0586: 1,
T0060: 1, H0250: 1,
H0635: 1, H0156: 1,
H0042: 1, H0274: 1,
T0048: 1, H0581: 1,
H0421: 1, H0251: 1,
L0040: 1, H0545: 1,
H0009: 1, H0123: 1,
H0373: 1, S0214: 1,
H0328: 1, H0031: 1,
H0553: 1, H0598: 1,
H0534: 1, H0135: 1,
H0591: 1, H0616: 1,
H0063: 1, H0264: 1,
H0412: 1, H0059: 1,
H0100: 1, L0475: 1,

	2922	1432 - 1770	747	1048792	HMSKI90
H0560: 1, H0561: 1, S0352: 1, S0382: 1, S0150: 1, S0344: 1, S0210: 1, L0763: 1, L0769: 1, L0638: 1, L0637: 1, L5565: 1, L0772: 1, L0372: 1, L0800: 1, L0648: 1, L0662: 1, L0767: 1, L0768: 1, L0806: 1, L0655: 1, L0629: 1, L0658: 1, L0517: 1, L0526: 1, L0529: 1, L0532: 1, H0698: 1, L0520: 1, H0547: 1, H0519: 1, H0690: 1, H0682: 1, H0659: 1, H0658: 1, H0670: 1, H0539: 1, S0380: 1, S0152: 1, H0521: 1, H0704: 1, H0478: 1, S3014: 1, S0032: 1, L0749: 1, L0750: 1, L0756: 1, L0757: 1, H0445: 1, S0434: 1, L0608: 1, H0668: 1, S0194: 1 and H0423: 1. AR096: 4, AR089: 4, AR060: 2, AR033: 2, AR104: 2, AR061: 1,					

HSYBI49	1049151	748	2 - 805	2923	AR053: 0, AR055: 0, AR039: 0 H0171: 1, S0444: 1 and S0002: 1.	AR089: 15, AR096: 14, AR060: 12, AR039: 10, AR104: 8, AR053: 8, AR055: 4, AR033: 4, AR061: 3, AR052: 2 L0777: 17, H0521: 11, L0747: 6, L0649: 5, H0586: 4, L0664: 4, L0748: 4, L0749: 4, H0661: 3, S0132: 3, H0587: 3, H0509: 3, L0637: 3, L0662: 3, L0806: 3, L0665: 3, L0779: 3, S0358: 2, L0717: 2, T0040: 2, H0014: 2, H0494: 2, S0438: 2, L0451: 2, H0547: 2, H0435: 2, H0658: 2, H0648: 2, H0672: 2, L0602: 2, S0436: 2, H0543: 2, L0448: 1, S0476: 1, H0431: 1, H0592: 1, T0114: 1, L0021: 1, T0010: 1, H0188: 1,

HTXSN37	1049372	749	1061-1864	2924	Thr-34 to Glu-47, Pro-82 to Ser-104, His-120 to Asn-126, His-129 to Pro-152, Cys-214 to Lys-220, Lys-261 to Ser-268.	S0422: 31, L0748: 16, L0803: 12, H0580: 11, H0615: 10, L0754: 9, L0596: 9, S0360: 8, L0805: 8, L0779: 8, L0663: 7, L0745: 7, S0358: 6, H0271: 6, L0766: 6, L0809: 6, S0406: 6, L0777: 6, S0007: 5, H0046: 5, H0024: 5, L0770: 5, L0761: 5, L0771: 5, L0662: 5, L0657: 5, L0666: 5, H0710: 5, H0436: 5, L0750: 5, H0542: 5, S0444: 4, S0476: 4, H0547: 4,	T0023: 1, L0483: 1, H0551: 1, S0352: 1, H0633: 1, L0763: 1, L0761: 1, L0646: 1, L0648: 1, L4500: 1, L5568: 1, L0774: 1, L0775: 1, L0525: 1, L0653: 1, L0657: 1, H0690: 1, H0684: 1, S0378: 1, H0479: 1, L0754: 1, L0755: 1, L0759: 1, L0362: 1 and S0242: 1.

S0126: 4, H0648: 4,
S0404: 4, S0434: 4,
L0599: 4, H0543: 4,
H0624: 3, H0224: 3,
S0114: 3, S0116: 3,
S0442: 3, H0549: 3,
H0618: 3, H0620: 3,
H0616: 3, H0264: 3,
H0494: 3, S0002: 3,
L0646: 3, L0764: 3,
L0794: 3, L0804: 3,
L0776: 3, L0783: 3,
L0792: 3, S0374: 3,
H0659: 3, H0521: 3,
L0747: 3, L0756: 3,
L0755: 3, L0758: 3,
H0506: 3, H0341: 2,
H0619: 2, H0645: 2,
H0574: 2, T0060: 2,
H0013: 2, H0156: 2,
H0599: 2, S0474: 2,
H0052: 2, H0251: 2,
H0009: 2, S6028: 2,
H0028: 2, H0428: 2,
H0622: 2, H0553: 2,
H0135: 2, H0090: 2,
H0038: 2, H0634: 2,
L0065: 2, H0509: 2,
S0344: 2, S0426: 2,
L0769: 2, L0637: 2,

L0772: 2, L0648: 2,
L0806: 2, L0438: 2,
H0520: 2, H0670: 2,
H0660: 2, H0672: 2,
H0651: 2, S0328: 2,
H0539: 2, S0378: 2,
S0136: 2, S3012: 2,
S3014: 2, S0206: 2,
L0751: 2, L0746: 2,
L0752: 2, S0436: 2,
L0608: 2, L0601: 2,
H0423: 1, H0171: 1,
H0265: 1, H0556: 1,
H0225: 1, H0686: 1,
H0738: 1, H0657: 1,
H0484: 1, H0661: 1,
H0662: 1, H0589: 1,
S0356: 1, S0376: 1,
S0410: 1, T0008: 1,
H0733: 1, H0208: 1,
S0046: 1, H0640: 1,
L0717: 1, H0351: 1,
S0278: 1, H0550: 1,
H0431: 1, H0461: 1,
H0409: 1, H0299: 1,
H0601: 1, H0333: 1,
H0486: 1, H0190: 1,
H0635: 1, S0010: 1,
H0318: 1, H0007: 1,
H0263: 1, H0596: 1,

H0327: 1, H0544: 1,
L0471: 1, H0051: 1,
H0179: 1, H0687: 1,
S0214: 1, H0252: 1,
H0688: 1, H0039: 1,
H0031: 1, H0032: 1,
H0674: 1, H0124: 1,
H0316: 1, H0059: 1,
H0040: 1, H0063: 1,
H0551: 1, H0059: 1,
L0564: 1, T0041: 1,
H0560: 1, S0440: 1,
S0144: 1, S0142: 1,
L0598: 1, H0529: 1,
L0520: 1, L0640: 1,
L0631: 1, L0638: 1,
L0795: 1, L5566: 1,
L0667: 1, L0643: 1,
L0521: 1, L0767: 1,
L5574: 1, L0375: 1,
L0523: 1, L0653: 1,
L0606: 1, L0807: 1,
L0527: 1, L0512: 1,
L0659: 1, L0517: 1,
L0542: 1, L0382: 1,
L0530: 1, L0787: 1,
L0789: 1, L0790: 1,
L0791: 1, L0664: 1,
S0052: 1, H0519: 1,
H0593: 1, S0122: 1,

HMUBT31	1049466	750	2 – 1429	2925	Lys-45 to Asp-54, Thr-56 to Leu-63, Gln-227 to Thr-241, Glu-287 to Val-292, Gln-331 to Gly-337, Glu-402 to Asp-411, Glu-436 to Cys-441, Glu-454 to Glu-461.	L0605: 28, L0754: 9, S0003: 6, L0803: 6, L0777: 5, L0759: 4, L0770: 3, L0663: 3, H0683: 3, L0439: 3, L0756: 3, L0599: 3, S0026: 3, H0171: 2, S0418: 2, H0587: 2, H0050: 2, L0483: 2, H0032: 2, H0591: 2, H0413: 2, L0772: 2, L0768: 2, L0649: 2, L0659: 2, L0666: 2, H0547: 2, H0519: 2, H0670: 2, S0380: 2,	H0684: 1, S0330: 1, H0518: 1, H0522: 1, H0478: 1, S0027: 1, S0028: 1, L0743: 1, L0744: 1, L0439: 1, L0740: 1, L0749: 1, L0786: 1, L0731: 1, L0757: 1, S0260: 1, H0444: 1, H0595: 1, L0584: 1, L0605: 1, L0581: 1, L0362: 1, H0653: 1, H0136: 1, S0192: 1, H0422: 1, S0424: 1, H0008: 1 and H0352: 1.

L0747: 2, L0731: 2,
L0587: 2, L0591: 2,
L0362: 2, S0192: 2,
H0624: 1, T0049: 1,
H0663: 1, H0402: 1,
H0638: 1, S0376: 1,
S0444: 1, S0360: 1,
H0208: 1, S6026: 1,
H0392: 1, H0635: 1,
L0021: 1, H0575: 1,
H0581: 1, H0052: 1,
H0596: 1, H0597: 1,
L0738: 1, H0544: 1,
H0024: 1, S0051: 1,
H0428: 1, H0622: 1,
H0031: 1, H0553: 1,
H0644: 1, H0169: 1,
H0090: 1, H0038: 1,
H0040: 1, H0100: 1,
H0494: 1, H0560: 1,
H0625: 1, H0646: 1,
S0344: 1, H0538: 1,
S0422: 1, H0529: 1,
L0646: 1, L0662: 1,
L0794: 1, L0387: 1,
L0766: 1, L0804: 1,
L0776: 1, L0527: 1,
L0647: 1, L0665: 1,
L0438: 1, L0352: 1,
H0435: 1, H0658: 1,

HIFPDO90	1049644	751	456 - 202	2926	Asp-74 to His-85.	H0660: 1, H0672: 1, S0330: 1, S0378: 1, H0518: 1, H0521: 1, H0522: 1, L0779: 1, S0031: 1, H0444: 1, L0589: 1, L0592: 1 and L0608: 1. S0134: 1, S0222: 1, L0774: 1, L0776: 1 and L0366: 1.	5q31	121050, 131400, 138040, 153455, 159000, 179095, 181460, 192974, 192974, 600807, 601596, 601692, 601692, 601692, 601692, 602089, 602121, 602460
HVVCB79	1050102	752	195 - 1205	2927	Glu-29 to Cys-39, Val-46 to Ser-52, Asn-58 to Gly-65, Cys-68 to His-82, Tyr-84 to Gly-94.	L0659: 19, S0476: 18, H0271: 18, S0152: 15, H0521: 12, L0666: 7, S0132: 6, H0494: 5, L0754: 5, L0601: 5.	10q24	157640, 174900, 180250, 186770, 236730,

271245, 278000, 278000, 600095, 600512, 601107, 601130, 602082		
Leu-122 to Trp-138, Ala-158 to Leu-170, Gly-175 to Arg-182, Tyr-203 to Ser-210, Gly-246 to Met-258, Arg-288 to Gln-296,	S0360: 4, L0771: 4, L0653: 4, L0751: 4, H0295: 3, H0486: 3, H0635: 3, H0416: 3, H0615: 3, L0662: 3, S0428: 3, L0748: 3, L0747: 3, L0731: 3, H0661: 2, S0376: 2, L0437: 2, H0587: 2, H0485: 2, T0039: 2, H0318: 2, H0545: 2, H0620: 2, H0266: 2, H0090: 2, H0623: 2, L0763: 2, L0646: 2, L0642: 2, L0774: 2, L0775: 2, L0378: 2, L0806: 2, L0664: 2, S0374: 2, H0519: 2, S0406: 2, L0439: 2, L0779: 2, L0755: 2, L0604: 2, L0698: 2, H0149: 1, H0686: 1, H0713: 1, S0212: 1, H0255: 1, S0408: 1, H0637: 1, S0046: 1, H0411: 1, S0278: 1, H0599: 1, H0251: 1, H0457: 1, H0024: 1, H0014: 1, H0328: 1, H0553: 1, H0644: 1,	

HDPGR19	1050167	753	2 - 670	2928		
				Ala-32 to Arg-48, Cys-138 to Ser-147, Lys-161 to Glu-166, Pro-179 to Asn-189.	H0598: 1, H0634: 1, H0268: 1, H0056: 1, L0564: 1, S0344: 1, S0002: 1, S0426: 1, L0770: 1, L0372: 1, L0641: 1, L0645: 1, L0648: 1, L0767: 1, L0649: 1, L0389: 1, L0388: 1, L0803: 1, L0654: 1, L0793: 1, L0665: 1, S0052: 1, S0053: 1, S0216: 1, H0658: 1, H0672: 1, H0518: 1, H0522: 1, H0696: 1, L0750: 1, L0752: 1, H0445: 1, S0436: 1, L0596: 1, S0458: 1 and H0506: 1.	AR055: 2, AR033: 1, AR089: 1, AR060: 1, AR096: 1, AR039: 0, AR061: 0, AR052: 0, AR053: 0 H0521: 36, L0754: 20, L0748: 13, L0740: 12, L0439: 9, S0440: 8, H0522: 8, L0777: 8, H0580: 7, H0641: 7, L0659: 7, S0126: 7, S0436: 7, H0638: 6,

H0616: 6, L0757: 6,
L0758: 6, H0486: 5,
S0438: 5, S0002: 5,
L0775: 5, L0809: 5,
S0408: 4, H0574: 4,
H0553: 4, S0344: 4,
L0805: 4, L0655: 4,
L0664: 4, H0518: 4,
L0744: 4, L0747: 4,
L0749: 4, H0624: 3,
S0376: 3, S0360: 3,
S0410: 3, H0004: 3,
H0581: 3, S0003: 3,
S0214: 3, H0428: 3,
H0622: 3, H0038: 3,
S0142: 3, H0529: 3,
L0646: 3, L0771: 3,
L0521: 3, L0662: 3,
H0689: 3, H0658: 3,
S0330: 3, L0779: 3,
L0731: 3, L0759: 3,
S0342: 2, H0717: 2,
S0356: 2, S0444: 2,
H0599: 2, H0318: 2,
H0457: 2, T0003: 2,
H0024: 2, H0057: 2,
H0179: 2, H0674: 2,
H0591: 2, H0561: 2,
L0770: 2, L0769: 2,
L0627: 2, L0641: 2,

L0649: 2, L0803: 2,
L0653: 2, L0776: 2,
L0791: 2, L0666: 2,
S0374: 2, L0438: 2,
L0547: 2, H0593: 2,
H0659: 2, H0670: 2,
S0152: 2, H0696: 2,
H0436: 2, L0751: 2,
L0750: 2, L0752: 2,
L0591: 2, L0581: 2,
L0593: 2, L0362: 2,
S0242: 2, H0170: 1,
H0556: 1, H0686: 1,
H0713: 1, H0294: 1,
H0583: 1, L0415: 1,
L0808: 1, L0785: 1,
H0663: 1, S0418: 1,
S0442: 1, S0558: 1,
H0637: 1, H0735: 1,
H0733: 1, H0339: 1,
S0132: 1, H0393: 1,
H0411: 1, S0278: 1,
S0222: 1, H0601: 1,
H0586: 1, H0587: 1,
H0333: 1, H0331: 1,
L0586: 1, H0013: 1,
H0250: 1, H0069: 1,
H0505: 1, S0474: 1,
H0052: 1, H0596: 1,
H0546: 1, H0545: 1,

H0046: 1, H0123: 1,
H0014: 1, H0373: 1,
S0051: 1, H0510: 1,
H0266: 1, S0318: 1,
S0316: 1, H0328: 1,
H0688: 1, H0031: 1,
H0032: 1, H0673: 1,
H0169: 1, H0598: 1,
H0090: 1, T0069: 1,
H0100: 1, T0041: 1,
T0042: 1, S0370: 1,
H0633: 1, H0646: 1,
S0426: 1, L0369: 1,
L0763: 1, L0638: 1,
L0372: 1, L0644: 1,
L0764: 1, L0766: 1,
L0381: 1, L0774: 1,
L0376: 1, L0806: 1,
L0652: 1, L0607: 1,
L0527: 1, L0515: 1,
L0542: 1, L0789: 1,
L0663: 1, L0665: 1,
S0052: 1, L0352: 1,
H0520: 1, H0519: 1,
H0690: 1, H0660: 1,
S0380: 1, S0350: 1,
S0146: 1, S0406: 1,
S3014: 1, S0027: 1,
L0756: 1, S0031: 1,
H0045: 1, S0434: 1,

| HVVDX63 | 1050256 | 754 | 2483 - 1299 | 2929 | Ala-1 to Ser-19, Gln-50 to Ala-69, Lys-113 to Lys-120, Thr-132 to Trp-147, Glu-162 to Gly-172, Leu-185 to Ser-219, Thr-226 to Tyr-234, Pro-288 to Pro-304, Glu-312 to Lys-324, Cys-344 to Gly-355. | L0592: 1, S0026: 1, H0667: 1, S0192: 1, S0194: 1, S0196: 1, H0542: 1, H0423: 1, H0422: 1, S0458: 1, H0352: 1 and H0712: 1. | H0556: 10, L0758: 9, L0777: 7, H0422: 7, H0271: 6, H0265: 5, H0179: 5, H0634: 5, L0747: 5, L0766: 4, L0664: 4, L0751: 4, H0542: 4, H0423: 4, H0657: 3, S0476: 3, H0069: 3, H0641: 3, L0761: 3, H0555: 3, H0436: 3, L0757: 3, H0222: 2, S0132: 2, H0486: 2, H0553: 2, H0551: 2, L0631: 2, L0769: 2, L0667: 2, L0772: 2, L0662: 2, L0378: 2, L0809: 2, S0052: 2, H0658: 2, H0672: 2, S0328: 2, H0518: 2, L0749: 2, L0750: 2, H0445: 2, L0596: 2, L0362: 2, H0653: 2, H0220: 1, H0713: 1, S0218: 1, |

H0663: 1, H0402: 1,
S0418: 1, S0442: 1,
S0376: 1, S0444: 1,
S0046: 1, H0392: 1,
N0009: 1, H0042: 1,
H0575: 1, S0474: 1,
H0581: 1, H0085: 1,
H0546: 1, H0545: 1,
H0457: 1, H0050: 1,
H0014: 1, H0093: 1,
H0083: 1, H0060: 1,
H0247: 1, H0687: 1,
H0622: 1, L0483: 1,
S0368: 1, H0032: 1,
H0040: 1, H0623: 1,
H0561: 1, H0633: 1,
H0646: 1, S0142: 1,
S0002: 1, L0770: 1,
L0646: 1, L0764: 1,
L0768: 1, L0364: 1,
L0775: 1, L0776: 1,
L0653: 1, L0657: 1,
L0607: 1, L0382: 1,
L0658: 1, L0791: 1,
L0789: 1, L0665: 1,
L0666: 1, L0593: 1,
H0701: 1, H0659: 1,
H0435: 1, S3014: 1,
H0522: 1, L0748: 1,

HNOJA87	1050282	755	616 - 2415	2930	L0731: 1, S0196: 1 and H0506: 1.	2q31	I00690, 120180, 120180, 120180, 120180, 120190, 142989, 156232, 178600, 266100, 600258, 600321
					Ser-35 to Glu-40, Leu-43 to Lys-63, Gln-88 to Tyr-97, Gln-156 to Glu-161, Val-218 to Phe-223, Ser-229 to Cys-237, Phe-323 to Ala-332, Phe-334 to Ser-339, Glu-357 to Gly-362, Ser-382 to Pro-391, Ser-403 to His-411, Asp-414 to Leu-425, Pro-429 to Arg-444, Ser-481 to Asn-486, Asp-495 to Lys-503, Asn-508 to Leu-514, Lys-528 to Ser-544, Asp-565 to Tyr-576, Leu-578 to Gly-584, Lys-591 to Asn-600,	L0758: 8, L0439: 7, S0003: 6, L0602: 6, L0665: 5, S0330: 5, H0521: 5, L0755: 5, L0731: 5, L0483: 4, L0598: 4, L0766: 4, L0775: 4, L0666: 4, L0748: 4, H0423: 4, H0170: 3, H0580: 3, H0441: 3, H0687: 3, S0022: 3, L0659: 3, H0144: 3, H0547: 3, L0740: 3, L0751: 3, L0596: 3, H0411: 2, H0250: 2, S0280: 2, H0575: 2, H0051: 2, H0083: 2, H0031: 2, UNKWN: 2, L0763: 2, L0776: 2, L0664: 2, S0148: 2, L0438: 2, H0660: 2, S0328: 2, S0380: 2, L0747: 2, L0777: 2, L0590: 2, L0592: 2, L0581: 2, L0594: 2, L0362: 2, S0194: 2, H0624: 1, T0002: 1, H0140: 1, H0685: 1, S0040: 1,		

S0134: 1, H0583: 1,
S0116: 1, S0001: 1,
H0483: 1, H0664: 1,
S0420: 1, S0354: 1,
S0358: 1, S0360: 1,
H0431: 1, H0600: 1,
H0592: 1, H0586: 1,
H0587: 1, T0114: 1,
H0013: 1, H0427: 1,
H0098: 1, H0004: 1,
S0010: 1, H0581: 1,
H0421: 1, H0596: 1,
H0545: 1, H0050: 1,
L0471: 1, H0024: 1,
H0014: 1, H0373: 1,
H0375: 1, H0266: 1,
H0428: 1, H0070: 1,
H0039: 1, H0644: 1,
H0032: 1, H0598: 1,
H0591: 1, H0040: 1,
H0616: 1, H0551: 1,
T0067: 1, H0647: 1,
L0770: 1, L0769: 1,
L0638: 1, L0646: 1,
L0764: 1, L0648: 1,
L0521: 1, L0549: 1,
L0389: 1, L0806: 1,
L0652: 1, L0655: 1,
L0607: 1, L0526: 1,
L0783: 1, S0053: 1,

| HTPGI65 | 1050419 | 756 | 56 - 1273 | 2931 | Ser-55 to Thr-60, Glu-97 to Ser-103, Thr-164 to Glu-170, Gly-192 to Gly-197, Leu-204 to Ser-218, Ala-238 to Ser-250, Asp-265 to Tyr-292, Gly-298 to Gly-307, Gly-351 to Met-359, Phe-389 to Glu-400. | T0068: 1, H0684: 1, H0670: 1, S0378: 1, H0518: 1, H0696: 1, S0406: 1, H0436: 1, L0754: 1, L0750: 1, L0753: 1, L0759: 1, H0445: 1, S0434: 1, L0599: 1, L0608: 1, L0366: 1, S0026: 1, H0667: 1, S0242: 1, H0422: 1 and S0424: 1. | S0444: 13, L0751: 12, S0358: 11, L0659: 11, S0436: 10, S0442: 8, S0410: 8, S0406: 8, S0434: 8, L0662: 6, H0435: 6, S0440: 5, L0657: 5, S0354: 4, T0023: 4, L0764: 4, L0771: 4, L0666: 4, H0690: 4, L0743: 4, L0754: 4, L0601: 4, H0046: 3, H0615: 3, H0617: 3, H0032: 3, H0647: 3, L0372: 3, L0665: 3, H0593: 3, L0744: 3, L0748: 3, H0663: 2, S0376: 2, S0408: 2, H0036: 2, H0622: 2, L0483: 2, | 1q32.2 | 145260, 600759, 601975 |

H0553: 2, L0646: 2, L0649: 2, L0664: 2, S0374: 2, H0520: 2, H0689: 2, H0682: 2, H0600: 2, S0330: 2, H0555: 2, L0750: 2, L0596: 2, S0430: 1, H0483: 1, H0671: 1, H0661: 1, S0360: 1, H0549: 1, H0431: 1, H0574: 1, H0632: 1, H0270: 1, T0040: 1, T0060: 1, H0590: 1, H0085: 1, H0263: 1, L0040: 1, H0597: 1, H0231: 1, H0316: 1, H0040: 1, H0059: 1, H0117: 1, S0448: 1, S0464: 1, S0306: 1, H0509: 1, H0130: 1, L0763: 1, L0627: 1, L0374: 1, L0765: 1, L0648: 1, L0803: 1, L0774: 1, L0775: 1, L0806: 1, L0652: 1, L0653: 1, L0776: 1, L0540: 1, L0518: 1, L0782: 1, L0382: 1, L0809: 1, L0790: 1, H0547: 1, H0658: 1,

Clone				Amino Acid Mutations	Codes	Codes	Chromosome	OMIM
HHFGN14	1050536	757	1791 - 2738	2932	Pro-7 to Ala-17, Pro-28 to Gln-38, Asp-58 to Ser-78, Phe-113 to Asp-120, Tyr-171 to Glu-177, Gln-237 to Gln-246.	H0670: 1, H0672: 1, S0328: 1, S0380: 1, S0404: 1, H0478: 1, S0432: 1, L0752: 1, L0591: 1, L0608: 1 and H0506: 1.	S0280: 3, H0581: 3, H0622: 3, H0690: 3, L0751: 3, H0506: 3, S0356: 2, H0670: 2, H0254: 1, S0046: 1, H0411: 1, H0438: 1, H0600: 1, H0632: 1, H0635: 1, H0599: 1, H0009: 1, H0050: 1, H0023: 1, T0010: 1, H0375: 1, H0687: 1, H0039: 1, S0364: 1, H0509: 1, L0527: 1, S0052: 1, H0699: 1, L0438: 1, H0593: 1, H0689: 1, H0660: 1, S0378: 1, H0555: 1, S0392: 1, S0390: 1, S0037: 1 and S0196: 1.	12q13	107777, 123940, 139350, 139350, 148040, 148041, 148043, 148070, 231550, 600194, 600231, 600536, 600808, 600956, 601284, 601769, 601769, 601928, 602116, 602153
HTAIN76	1050553	758	83 - 1300	2933	Pro-19 to Ala-25, Pro-30 to Gly-50, Arg-66 to Gly-78.		L0740: 12, L0653: 6, L0665: 6, H0150: 5, L0439: 5, H0688: 4, L0771: 4, L0659: 4.		

L0809: 4, L0751: 4,
L0747: 4, L0749: 4,
L0779: 4, L0601: 4,
S0420: 3, H0486: 3,
H0620: 3, H0494: 3,
L0662: 3, L0757: 3,
S0040: 2, H0662: 2,
S0007: 2, H0549: 2,
S0222: 2, H0009: 2,
H0123: 2, H0024: 2,
H0606: 2, H0634: 2,
H0413: 2, H0100: 2,
L0769: 2, L0794: 2,
L0649: 2, L0803: 2,
L0655: 2, L0382: 2,
L0666: 2, L0731: 2,
L0758: 2, L0759: 2,
L0605: 2, H0170: 1,
T0049: 1, H0663: 1,
L0005: 1, S0045: 1,
S0046: 1, H0619: 1,
H0550: 1, S0220: 1,
L0468: 1, H0587: 1,
H0643: 1, H0574: 1,
H0632: 1, H0635: 1,
T0048: 1, H0505: 1,
H0597: 1, H0546: 1,
H0545: 1, H0046: 1,
N0007: 1, H0188: 1,
H0622: 1, T0023: 1,

HLYB089	1050702	759	3 - 557	2934	Pro-1 to Thr-10, Ser-25 to Ile-46, Glu-76 to Ile-82, Ile-89 to Gly-95, Lys-109 to Glu-118, Asp-127 to Gly-132, Glu-148 to Leu-155, Glu-161 to Glu-172.	AR089: 11, AR104: 9, Xq28 AR060: 6, AR096: 3, 3 AR061: 3, AR055: 2 L0803: 7, H0024: 5, L0805: 5, L0750: 5, S0026: 5, H0208: 3, S0440: 3, L0769: 3, S0126: 3, H0670: 3, S0330: 3, S0152: 3, H0411: 2, S0222: 2, S0010: 2, H0046: 2.	H0213: 1, L0142: 1, H0135: 1, H0551: 1, H0059: 1, H0509: 1, L0763: 1, L0770: 1, L0637: 1, L0768: 1, L0775: 1, L0375: 1, L0805: 1, L0776: 1, L0629: 1, L0657: 1, L0789: 1, L0532: 1, L0663: 1, L0664: 1, H0144: 1, H0519: 1, H0690: 1, H0435: 1, H0658: 1, H0672: 1, S0378: 1, H0521: 1, S0037: 1, L0743: 1, L0748: 1, L0756: 1, L0780: 1, L0752: 1, L0591: 1, H0667: 1, S0242: 1 and S0276: 1.	300031, 300044, 300048, 300049, 300049, 300055, 300100, 300100, 300104, 300126, 301201.

745

301590,	H0123: 2, L0471: 2,
302060,	H0428: 2, H0616: 2,
302060,	H0087: 2, L0763: 2,
302060,	L0764: 2, L0766: 2,
302060,	L0375: 2, L0666: 2,
302960,	H0659: 2, L0740: 2,
303700,	L0758: 2, L0759: 2,
303800,	H0445: 2, L0599: 2,
303900,	H0170: 1, H0686: 1,
304800,	H0344: 1, L0002: 1,
305900,	H0657: 1, H0306: 1,
305900,	S0356: 1, S0358: 1,
305900,	S0376: 1, T0008: 1,
305900,	S0132: 1, H0455: 1,
306700,	L0021: 1, L0022: 1,
306995,	H0263: 1, H0572: 1,
308310,	H0050: 1, H0620: 1,
308840,	H0051: 1, H0083: 1,
308840,	H0375: 1, S6028: 1,
308840,	H0687: 1, S0022: 1,
309200,	H0615: 1, H0688: 1,
309548,	H0031: 1, H0708: 1,
309620,	H0068: 1, H0038: 1,
309900,	H0264: 1, H0272: 1,
310300,	T0042: 1, H0561: 1,
310400,	S0144: 1, L0598: 1,
310460,	S0529: 1, L0631: 1,
310460,	L0770: 1, L0637: 1,
311300,	L0800: 1, L0794: 1,
311510,	L0806: 1, L0382: 1,
314300,	

| HMEKJ82 | 1050767 | 760 | 1 - 597 | 2935 | Arg-10 to Lys-24, Phe-50 to Arg-57. | L0809: 1, L0787: 1, L0665: 1, H0144: 1, S0374: 1, H0566: 1, S0380: 1, H0696: 1, S3012: 1, S0032: 1, L0747: 1, L0749: 1, L0777: 1, L0752: 1, L0753: 1, L0757: 1, S0434: 1, S0011: 1, S0276: 1 and H0542: 1. AR089: 2, AR096: 1, AR104: 1, AR060: 0, AR061: 0, AR055: 0, S0414: 6, L0754: 6, L0803: 4, H0032: 3, L0774: 3, L0665: 3, L0752: 3, S0418: 2, L0005: 2, H0580: 2, H0431: 2, H0553: 2, H0673: 2, S0422: 2, L0598: 2, L0666: 2, L0748: 2, S0436: 2, L0589: 2, L0603: 2, S0001: 1, L0717: 1, H0415: 1, H0013: 1, H0635: 1, S0280: 1, H0581: 1, S0051: 1, H0266: 1, S0214: 1, H0428: 1, H0598: 1, H0616: 1, S0438: 1, | 314400 |

Clone ID		Range		Features	Signal data		Chromosome	OMIM
HOFNX17	1050969	761	47 - 604	2936	Ile-13 to Gly-19, Thr-21 to Gln-28, Lys-38 to Ser-45, Glu-62 to Tyr-68, Val-72 to Gly-77, Pro-87 to Ser-93, Thr-117 to Gln-126, Gln-133 to Leu-139.	S0440: 1, H0641: 1, H0633: 1, H0646: 1, UNKWN: 1, L0646: 1, L0662: 1, L0766: 1, L0659: 1, L0783: 1, L0809: 1, L0790: 1, L0532: 1, H0658: 1, H0521: 1, S0406: 1, L0751: 1, L0779: 1, L0599: 1, S0011: 1, H0423: 1, H0422: 1, S0042: 1 and H0506: 1.	H0415: 12, H0414: 2, H0355: 1 and H0517: 1.	9q11-q22	229600, 264300, 600542, 602014, 602088
HAOSY21	1051095	762	153 - 425	2937	Asn-26 to Gly-31, Cys-44 to Asp-50, Gln-85 to Glu-91.	H0657: 2, H0686: 1, H0341: 1, L0493: 1, H0144: 1, H0689: 1, L0757: 1 and L0596: 1.			
HMWDB39	1051115	763	2 - 598	2938	Ala-1 to Gly-7, Ser-20 to Gly-36, Glu-107 to Thr-112, Glu-114 to Pro-119.	S0474: 13, L0758: 13, L0439: 11, L0754: 11, L0752: 10, H0581: 9, L0766: 9, L0740: 9, L0769: 8, H0423: 8, H0547: 7, L0750: 7,			

748

L0777: 7, H0013: 6,
H0445: 6, L0599: 6,
L0005: 5, S0358: 5,
S0360: 5, S0414: 5,
H0575: 5, L0776: 5,
S0126: 5, H0648: 5,
H0521: 5, H0171: 4,
H0583: 4, H0341: 4,
S0212: 4, H0580: 4,
I0619: 4, I0427: 4,
S0010: 4, S0346: 4,
H0046: 4, H0457: 4,
H0551: 4, L0763: 4,
L0794: 4, L0803: 4,
L0666: 4, H0522: 4,
L0759: 4, H0543: 4,
H0663: 3, H0638: 3,
S0442: 3, S0007: 3,
S0222: 3, H0244: 3,
S0003: 3, H0591: 3,
H0040: 3, T0042: 3,
S0142: 3, H0529: 3,
L0770: 3, L0637: 3,
L0771: 3, L0662: 3,
L0774: 3, L0805: 3,
L0655: 3, L0663: 3,
L0664: 3, L0665: 3,
H0659: 3, H0670: 3,
S0330: 3, H0539: 3,
S0152: 3, H0626: 3,